

=> fil reg

FILE 'REGISTRY' ENTERED AT 17:19:28 ON 21 OCT 2004

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PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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STRUCTURE FILE UPDATES: 20 OCT 2004 HIGHEST RN 766487-31-4

DICTIONARY FILE UPDATES: 20 OCT 2004 HIGHEST RN 766487-31-4

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:

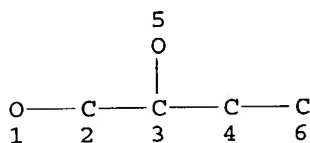
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> d sta que l31

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        I OR 10016-20-3/BI OR 35430-88-7/BI OR 442520-94-7/BI OR
        442520-96-9/BI OR 497-06-3/BI OR 7585-39-9/BI)
L3      2 SEA FILE=REGISTRY ABB=ON PLU=ON L2 AND S/ELS
L4      1 SEA FILE=REGISTRY ABB=ON PLU=ON 137349-92-9
L5      1 SEA FILE=REGISTRY ABB=ON PLU=ON 137349-92-9/CRN
L6      2 SEA FILE=REGISTRY ABB=ON PLU=ON (L4 OR L5)
L7      1 SEA FILE=REGISTRY ABB=ON PLU=ON L3 NOT L6
L9      SCR 2021
L11     STR

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NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 6

STEREO ATTRIBUTES: NONE

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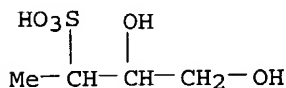
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L14     7025 SEA FILE=REGISTRY ABB=ON PLU=ON L13 AND 4/ELC.SUB
L15     4984 SEA FILE=REGISTRY ABB=ON PLU=ON L14 AND NR>=1
L16     2041 SEA FILE=REGISTRY ABB=ON PLU=ON L14 NOT L15
L17     131 SEA FILE=REGISTRY ABB=ON PLU=ON L16 AND PMS/CI
L18     93 SEA FILE=REGISTRY ABB=ON PLU=ON L16 AND NC>=2
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L20     22 SEA FILE=REGISTRY ABB=ON PLU=ON L18 NOT L19
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L22     65 SEA FILE=REGISTRY ABB=ON PLU=ON L16 AND IDS/CI
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        OR L20 OR L21 OR L22)

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 L25 442 SEA FILE=REGISTRY ABB=ON PLU=ON L24 AND 3-5/O  
 L26 7 SEA FILE=REGISTRY ABB=ON PLU=ON L25 AND 4/C  
 L27 3 SEA FILE=REGISTRY ABB=ON PLU=ON L26 NOT (MERCAPTO OR ION)  
 L28 12 SEA FILE=REGISTRY ABB=ON PLU=ON L23 AND 4/C  
 L29 5 SEA FILE=REGISTRY ABB=ON PLU=ON L28 NOT (MERCAPTO OR ION)  
 L30 4 SEA FILE=REGISTRY ABB=ON PLU=ON L29 NOT TRIHYDROXY  
 L31 6 SEA FILE=REGISTRY ABB=ON PLU=ON (L6 OR L7 OR L27 OR L30)

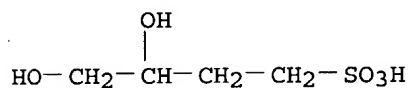
=> d ide can tot l31

L31 ANSWER 1 OF 6 REGISTRY COPYRIGHT 2004 ACS on STN  
 RN 739324-75-5 REGISTRY  
 CN 2-Butanesulfonic acid, 3,4-dihydroxy- (9CI) (CA INDEX NAME)  
 FS 3D CONCORD  
 MF C4 H10 O5 S  
 CI COM  
 SR CA



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L31 ANSWER 2 OF 6 REGISTRY COPYRIGHT 2004 ACS on STN  
 RN 442520-94-7 REGISTRY  
 CN 1-Butanesulfonic acid, 3,4-dihydroxy-, monosodium salt (9CI) (CA INDEX NAME)  
 MF C4 H10 O5 S . Na  
 SR CA  
 LC STN Files: CA, CAPLUS, USPAT2, USPATFULL  
 DT.CA Cplus document type: Patent  
 RL.P Roles from patents: PREP (Preparation)  
 CRN (137349-92-9)



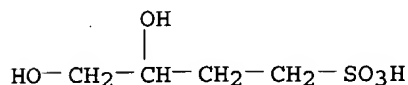
● Na

1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 137:95452

L31 ANSWER 3 OF 6 REGISTRY COPYRIGHT 2004 ACS on STN  
 RN 137349-92-9 REGISTRY  
 CN 1-Butanesulfonic acid, 3,4-dihydroxy- (9CI) (CA INDEX NAME)  
 FS 3D CONCORD  
 MF C4 H10 O5 S  
 CI COM  
 SR CA

LC STN Files: CA, CAPLUS, USPATFULL  
DT.CA Caplus document type: Patent  
RLD.P Roles for non-specific derivatives from patents: PREP (Preparation)

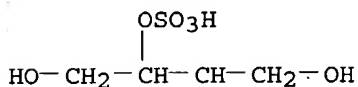


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 115:255625

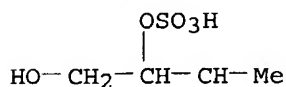
L31 ANSWER 4 OF 6 REGISTRY COPYRIGHT 2004 ACS on STN  
RN 130538-85-1 REGISTRY  
CN Propyl, 3-hydroxy-1-(hydroxymethyl)-2-(sulfooxy)- (9CI) (CA INDEX NAME)  
MF C4 H9 O6 S  
SR CA  
LC STN Files: CA, CAPLUS  
DT.CA Caplus document type: Journal  
RL.NP Roles from non-patents: FORM (Formation, nonpreparative); PREP  
(Preparation)



1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 113:230622

L31 ANSWER 5 OF 6 REGISTRY COPYRIGHT 2004 ACS on STN  
RN 130538-82-8 REGISTRY  
CN Propyl, 3-hydroxy-1-methyl-2-(sulfooxy)- (9CI) (CA INDEX NAME)  
MF C4 H9 O5 S  
SR CA  
LC STN Files: CA, CAPLUS  
DT.CA Caplus document type: Journal  
RL.NP Roles from non-patents: FORM (Formation, nonpreparative); PREP  
(Preparation)



1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 113:230622

L31 ANSWER 6 OF 6 REGISTRY COPYRIGHT 2004 ACS on STN  
RN 35430-88-7 REGISTRY

CN 2-Butanesulfonic acid, 1,4-dihydroxy-, monosodium salt (9CI) (CA INDEX NAME)

## OTHER NAMES:

CN Sodium 1,4-butanediol-2-sulfonate

CN Sodium 1,4-dihydroxy-2-butanesulfonate

MF C4 H10 O5 S . Na

CI COM

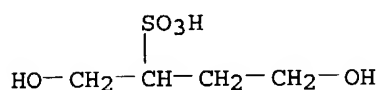
LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPAT2, USPATFULL

DT.CA CAPLUS document type: Patent

RL.P Roles from patents: PREP (Preparation); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

RLD.P Roles for non-specific derivatives from patents: PREP (Preparation); USES (Uses)

CRN (96573-91-0)



● Na

10 REFERENCES IN FILE CA (1907 TO DATE)

4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

10 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 137:95452  
REFERENCE 2: 128:89262  
REFERENCE 3: 113:207849  
REFERENCE 4: 104:150046  
REFERENCE 5: 102:205548  
REFERENCE 6: 102:47432  
REFERENCE 7: 101:239232  
REFERENCE 8: 99:6930  
REFERENCE 9: 84:61022  
REFERENCE 10: 76:89369

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(FILE 'HOME' ENTERED AT 16:48:09 ON 21 OCT 2004)  
SET COST OFF

FILE 'HCAPLUS' ENTERED AT 16:48:45 ON 21 OCT 2004

L1 1 S (US20040054164 OR US6610671 OR US20020128468)/PN OR (WO2002-U  
SEL RN

FILE 'REGISTRY' ENTERED AT 16:50:28 ON 21 OCT 2004

L2 8 S E1-E8  
L3 2 S L2 AND S/ELS  
L4 1 S 137349-92-9

L5 1 S 137349-92-9/CRN  
L6 2 S L4,L5  
L7 1 S L3 NOT L6  
L8 STR  
L9 SCR 2021  
L10 50 S L8 AND L9  
L11 STR L8  
L12 50 S L11 AND L9  
L13 25849 S L11 AND L9 FUL  
SAV TEMP L13 MAIER601/A  
L14 7025 S L13 AND 4/ELC.SUB  
L15 4984 S L14 AND NR>=1  
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L17 131 S L16 AND PMS/CI  
L18 93 S L16 AND NC>=2  
L19 71 S L17 AND L18  
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L21 60 S L17 NOT L18-L20  
L22 65 S L16 AND IDS/CI  
L23 1833 S L16 NOT L17-L22  
L24 946 S L23 AND 1/S  
L25 442 S L24 AND 3-5/O  
L26 7 S L25 AND 4/C  
L27 3 S L26 NOT (MERCAPTO OR ION)  
L28 12 S L23 AND 4/C  
L29 5 S L28 NOT (MERCAPTO OR ION)  
L30 4 S L29 NOT TRIHYDROXY  
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L35 616 S L34 NOT ESTER  
L36 254 S L35 NOT ACET?

FILE 'HCAOLD' ENTERED AT 17:13:56 ON 21 OCT 2004

L37 0 S L31

FILE 'HCAPLUS' ENTERED AT 17:14:29 ON 21 OCT 2004

L38 12 S L31  
L39 1 S L38 AND EASTMAN?/PA,CS  
L40 1 S L38 AND (BUCHANAN ? OR FALLING ? OR LAMBERT ? OR LARGE ? OR S  
L41 1 S L39,L40  
L42 6 S 3 4 DIHYDROXYBUTANE  
L43 18 S L38-L42  
L44 18 S L43 AND (PD<=20010111 OR PRD<=20010111 OR AD<=20010111)

FILE 'USPATFULL, USPAT2' ENTERED AT 17:19:10 ON 21 OCT 2004

L45 8 S L31

FILE 'REGISTRY' ENTERED AT 17:19:28 ON 21 OCT 2004

=> fil uspatall

FILE 'USPATFULL' ENTERED AT 17:19:42 ON 21 OCT 2004

CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'USPAT2' ENTERED AT 17:19:42 ON 21 OCT 2004

CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

=> d l45 bib abs hitstr tot

L45 ANSWER 1 OF 8 USPATFULL on STN

AN 2004:70936 USPATFULL

TI Cyclodextrin sulfonates, guest inclusion complexes, methods of making

the same and related materials

IN Buchanan, Charles M., Kingsport, TN, UNITED STATES  
 Falling, Steven N., Kingsport, TN, UNITED STATES  
 Lambert, Juanelle L., Gray, TN, UNITED STATES  
 Large, Shannon E., Blountville, TN, UNITED STATES  
 Szejtli, Jozsef, Budapest, HUNGARY  
 Szente, Lajos, Budapest, HUNGARY  
 Jicsinszky, Laszlo, Budapest, HUNGARY

PA Eastman Chemical Company, Kingsport, TN, UNITED STATES (U.S. corporation)

PI US 2004054164 A1 20040318

AI US 2003-601877 A1 20030624 (10)

RLI Division of Ser. No. US 2002-42306, filed on 11 Jan 2002, GRANTED, Pat. No. US 6610671

PRAI US 2001-261020P 20010111 (60)

DT Utility

FS APPLICATION

LREP NHAT D. PHAN, ESQ., BURNS, DOANE, SWECKER & MATHIS, L.L.P., P.O. Box 1404, Alexandria, VA, 22313-1404

CLMN Number of Claims: 22

ECL Exemplary Claim: 1

DRWN 8 Drawing Page(s)

LN.CNT 1404

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention relates to new cyclodextrin derivatives, processes for producing these cyclodextrin derivatives, and inclusion complexes comprised of the new cyclodextrin derivatives and guest molecules, as well as methods of making such materials and related materials and methods of using the same.

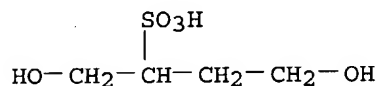
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 35430-88-7P, Sodium 1,4-dihydroxybutane-2-sulfonate  
 442520-94-7P

(model compound; cyclodextrin sulfonates, guest inclusion complexes, methods of making same and related materials)

RN 35430-88-7 USPATFULL

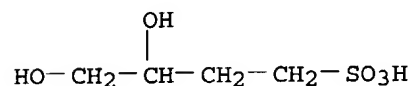
CN 2-Butanesulfonic acid, 1,4-dihydroxy-, monosodium salt (9CI) (CA INDEX NAME)



● Na

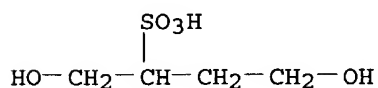
RN 442520-94-7 USPATFULL

CN 1-Butanesulfonic acid, 3,4-dihydroxy-, monosodium salt (9CI) (CA INDEX NAME)



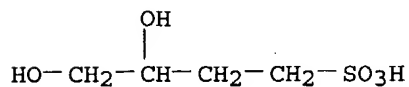
● Na

L45 ANSWER 2 OF 8 USPATFULL on STN  
 AN 2002:236264 USPATFULL  
 TI Cyclodextrin sulfonates, guest inclusion complexes methods of making the same and related materials  
 IN Buchanan, Charles M., Kingsport, TN, UNITED STATES  
 Falling, Steven N., Kingsport, TN, UNITED STATES  
 Lambert, Juanelle L., Gray, TN, UNITED STATES  
 Large, Shannon E., Blountville, TN, UNITED STATES  
 Szejtli, Jozsef, Budapest, HUNGARY  
 Szente, Lajos, Budapest, HUNGARY  
 Jicsinszky, Laszlo, Budapest, HUNGARY  
 PI US 2002128468 A1 20020912  
 US 6610671 B2 20030826  
 AI US 2002-42306 A1 20020111 (10)  
 PRAI US 2001-261020P 20010111 (60)  
 DT Utility  
 FS APPLICATION  
 LREP R. Danny Huntington, Esq., BURNS, DOANE, SWECKER & MATHIS, L.L.P., P.O. Box 1404, Alexandria, VA, 22313-1404  
 CLMN Number of Claims: 22  
 ECL Exemplary Claim: 1  
 DRWN 8 Drawing Page(s)  
 LN.CNT 1404  
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.  
 AB This invention relates to new cyclodextrin derivatives, processes for producing these cyclodextrin derivatives, and inclusion complexes comprised of the new cyclodextrin derivatives and guest molecules, as well as methods of making such materials and related materials and methods of using the same.  
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.  
 IT 35430-88-7P, Sodium 1,4-dihydroxybutane-2-sulfonate  
 442520-94-7P  
 (model compound; cyclodextrin sulfonates, guest inclusion complexes, methods of making same and related materials)  
 RN 35430-88-7 USPATFULL  
 CN 2-Butanesulfonic acid, 1,4-dihydroxy-, monosodium salt (9CI) (CA INDEX NAME)



● Na

RN 442520-94-7 USPATFULL  
 CN 1-Butanesulfonic acid, 3,4-dihydroxy-, monosodium salt (9CI) (CA INDEX NAME)



● Na

L45 ANSWER 3 OF 8 USPATFULL on STN

AN 97:118115 USPATFULL

TI Functional group terminated polymers containing sulfonate group via polymerization of sulfonated monomers

IN Chang, Wally L., Naperville, IL, United States

PA Witco Corporation, Greenwich, CT, United States (U.S. corporation)

PI US 5698626 19971216

AI US 1996-768662 19961218 (8)

DT Utility

FS Granted

EXNAM Primary Examiner: Michl, Paul R.

LREP Scully, Scott, Murhpy & Presser

CLMN Number of Claims: 21

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 880

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Disclosed is a process for producing water-dispersible polymers, particularly condensation polymers such as polyesters, and polyamides, by sulfonating an ethylenically unsaturated monomeric precursor and then condensation polymerizing the sulfonated precursor with a second monomer.

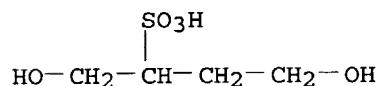
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 35430-88-7P

(functional group-terminated polymers containing sulfonate groups via polymerization of sulfonated monomers)

RN 35430-88-7 USPATFULL

CN 2-Butanesulfonic acid, 1,4-dihydroxy-, monosodium salt (9CI) (CA INDEX NAME)



● Na

L45 ANSWER 4 OF 8 USPATFULL on STN

AN 92:97298 USPATFULL

TI Vinyl polyether alcohols

IN Fischer, Martin, Ludwigshafen, Germany, Federal Republic of

Baur, Richard, Mutterstadt, Germany, Federal Republic of

Diessel, Paul, Mutterstadt, Germany, Federal Republic of

PA BASF Aktiengesellschaft, Ludwigshafen, Germany, Federal Republic of (non-U.S. corporation)

PI US 5162590 19921110

AI US 1991-651958 19910207 (7)

PRAI DE 1990-4004883 19900216

DT Utility

FS Granted

EXNAM Primary Examiner: Lone, Werren B.

LREP Oblon, Spivak, McClelland, Maier & Neustadt

CLMN Number of Claims: 3

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 354



CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Vinyl polyether alcohols of formula I ##STR1## (R=C.sub.1 -C.sub.25 -alkyl, C.sub.2 -C.sub.25 -alkenyl or alkylaryl having a total of not more than 20 carbon atoms,

A=1,2-alkylene having from 2 to 4 carbon atoms and n=1 to 20).

These compounds serve as intermediates in the preparation of polyether sulfonates of formula III ##STR2## (M=hydrogen, alkali metal or ammonium). The vinyl polyether alcohols of formula I are useful as surface-active compounds for inclusion in surface-active compositions.

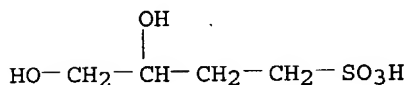
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 137349-92-9DP, alkoxylated

(preparation of, as surfactant)

RN 137349-92-9 USPATFULL

CN 1-Butanesulfonic acid, 3,4-dihydroxy- (9CI) (CA INDEX NAME)



L45 ANSWER 5 OF 8 USPATFULL on STN

AN 87:35798 USPATFULL

TI Preparation and use of sulphur-containing polyether-urethanes

IN Hentschel, Karl-Heinz, Krefeld, Germany, Federal Republic of

Kussi, Siegfried, Leverkusen, Germany, Federal Republic of

Botsch, Hansjurgen, Leverkusen, Germany, Federal Republic of

PA Bayer Aktiengesellschaft, Leverkusen, Germany, Federal Republic of (non-U.S. corporation)

PI US 4666618 19870519

AI US 1985-724373 19850418 (6)

PRAI DE 1984-3415178 19840421

DT Utility

FS Granted

EXNAM Primary Examiner: Lander, Ferris H.

LREP Sprung Horn Kramer & Woods

CLMN Number of Claims: 7

ECL Exemplary Claim: 1,6

DRWN No Drawings

LN.CNT 896

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The new sulphur-containing polyether-urethanes are prepared by a polyaddition reaction of aromatic, cycloaliphatic and/or aliphatic polyisocyanates with

(a) at least one aliphatic dialcohol containing a sulphur bridge, of the formula ##STR1## in which R.sup.1 to R.sup.8 are identical or different and denote hydrogen or an alkyl radical with 1 to 10 carbon atoms and

x denotes the average number of sulphur atoms in the range from 1.5 to 4,

if appropriate in the presence of

(b) a polyethylene glycol and/or

(c) a dialcohol which carries at least one anionic group and/or at least one diamine which carries an anionic group, and, if appropriate,

(d) other cycloaliphatic, araliphatic or heterocyclic dialcohols and/or aromatic, cycloaliphatic or aliphatic diamines.

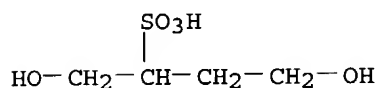
The compounds can be used as anti-wear agents in aqueous hydraulic fluids and cooling lubricant concentrates.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 35430-88-7DP, oxypropylated, polymers with polyethylene glycol, diisocyanates and polythiodialkanols (manufacture of, for water-based lubricants)

RN 35430-88-7 USPATFULL

CN 2-Butanesulfonic acid, 1,4-dihydroxy-, monosodium salt (9CI) (CA INDEX NAME)



● Na

L45 ANSWER 6 OF 8 USPATFULL on STN

AN 85:11932 USPATFULL

TI Stable, aqueous dispersions of polyurethane-ureas

IN Markusch, Peter H., McMurray, PA, United States

Rosthauser, James W., Imperial, PA, United States

Beatty, Michael C., Pittsburgh, PA, United States

PA Mobay Chemical Corporation, Pittsburgh, PA, United States (U.S. corporation)

PI US 4501852 19850226

AI US 1983-505600 19830620 (6)

DT Utility

FS Granted

EXNAM Primary Examiner: Ivy, C. Warren

LREP Harsh, Gene, Gil, Joseph C., Roy, Thomas W.

CLMN Number of Claims: 17

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 1439

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to a stable, aqueous dispersion of polyurethane-ureas wherein said polyurethane-ureas contain

(i) about 10 to 120 milliequivalents per 100 grams of polyurethane-urea of chemically incorporated anionic groups, and

(ii) up to about 10% by weight, based on the weight of the polyurethane-urea, of lateral and/or terminal hydrophilic chains containing ethylene oxide units,

wherein the counterions of the anionic groups are a mixture of volatile and non-volatile cations in an equivalent ratio of about 1:4 to 4:1.

The present invention is also directed to the coatings and films prepared from these dispersions.

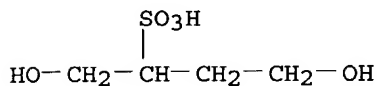
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 35430-88-7D, propoxylated, polymers with bis(isocyanatocyclohexyl)methane and neopentyl glycol and polyester diol

and polyethylenepropyl glycol Bu ether, salt  
(surfactants, in aqueous dispersions containing polyurethane ureas for coatings)

RN 35430-88-7 USPATFULL

CN 2-Butanesulfonic acid, 1,4-dihydroxy-, monosodium salt (9CI) (CA INDEX NAME)



● Na

L45 ANSWER 7 OF 8 USPATFULL on STN

AN 84:31648 USPATFULL

TI Process for the preparation of aqueous dispersions or solutions of polyurethane polyureas containing heat activated cross-linking agents, the dispersions or solutions obtainable by this process, and their use for the production of coatings

IN Nachtkamp, Klaus, Cologne, Germany, Federal Republic of  
Weider, Franz, Leverkusen, Germany, Federal Republic of  
Noll, Klaus, Cologne, Germany, Federal Republic of  
Pedain, Josef, Cologne, Germany, Federal Republic of  
Hoehne, Klaus, Leverkusen, Germany, Federal Republic of

PA Bayer Aktiengesellschaft, Leverkusen, Germany, Federal Republic of (non-U.S. corporation)

PI US 4452834 19840605

AI US 1982-420172 19820917 (6)

PRAI DE 1981-3137748 19810923

DT Utility

FS Granted

EXNAM Primary Examiner: Pertilla, Theodore E.

LREP Harsh, Gene, Gil, Joseph C., Roy, Thomas W.

CLMN Number of Claims: 11

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 861

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention relates to a new process for the preparation of storage stable aqueous dispersions or solutions of cross-linkable polyurethane polyureas containing heat activated cross-linking agents, in which mixtures of hydrophilically modified prepolymers containing isocyanate groups, hydrophobic polyisocyanates which contain blocked isocyanate groups and are neither soluble nor dispersible in water, and compounds containing at the most one free aminic or hydrazinic primary or secondary amino group and at least one blocked group which under the influence of water forms a free aminic or hydrazinic primary or secondary amino group and a total of at least two such amino groups are prepared in the absence of water and then mixed with water, and it also relates to the aqueous dispersions or solutions obtained by this process and to their use for the production of coatings on heat-resistant substrates.

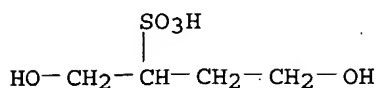
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 35430-88-7D, polyoxypropylated  
(in polyurethane latex coatings)

RN 35430-88-7 USPATFULL

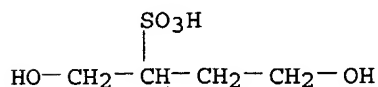
CN 2-Butanesulfonic acid, 1,4-dihydroxy-, monosodium salt (9CI) (CA INDEX

NAME)



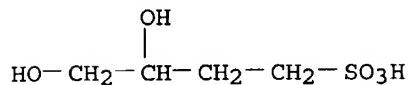
● Na

L45 ANSWER 8 OF 8 USPAT2 on STN  
 AN 2002:236264 USPAT2  
 TI Cyclodextrin sulfonates, guest inclusion complexes methods of making the same and related materials  
 IN Buchanan, Charles M., Kingsport, TN, United States  
 Falling, Steven N., Kingsport, TN, United States  
 Lambert, Juanelle L., Gray, TN, United States  
 Large, Shannon E., Blountville, TN, United States  
 Szejtli, Jozsef, Budapest, HUNGARY  
 Szente, Lajos, Budapest, HUNGARY  
 Jicsinszky, Laszlo, Budapest, HUNGARY  
 PA Eastman Chemical Company, Kingsport, TN, United States (U.S. corporation)  
 PI US 6610671 B2 20030826  
 AI US 2002-42306 20020111 (10)  
 PRAI US 2001-261020P 20010111 (60)  
 DT Utility  
 FS GRANTED  
 EXNAM Primary Examiner: Fonda, Kathleen K.; Assistant Examiner: Maier, Leigh C.  
 LREP Blake, Michael J., Graves, Jr., Bernard J.  
 CLMN Number of Claims: 14  
 ECL Exemplary Claim: 1  
 DRWN 10 Drawing Figure(s); 8 Drawing Page(s)  
 LN.CNT 1387  
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.  
 AB This invention relates to new cyclodextrin derivatives, processes for producing these cyclodextrin derivatives, and inclusion complexes comprised of the new cyclodextrin derivatives and guest molecules, as well as methods of making such materials and related materials and methods of using the same.  
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.  
 IT 35430-88-7P, Sodium 1,4-dihydroxybutane-2-sulfonate  
 442520-94-7P  
 (model compound; cyclodextrin sulfonates, guest inclusion complexes, methods of making same and related materials)  
 RN 35430-88-7 USPAT2  
 CN 2-Butanesulfonic acid, 1,4-dihydroxy-, monosodium salt (9CI) (CA INDEX NAME)



● Na

RN 442520-94-7 USPAT2  
 CN 1-Butanesulfonic acid, 3,4-dihydroxy-, monosodium salt (9CI) (CA INDEX  
 NAME)



● Na

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FILE COVERS 1907 - 21 Oct 2004 VOL 141 ISS 17  
 FILE LAST UPDATED: 20 Oct 2004 (20041020/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> => d all hitstr tot 144

L44 ANSWER 1 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2002:539717 HCAPLUS  
 DN 137:95452  
 ED Entered STN: 19 Jul 2002  
 TI Cyclodextrin sulfonates, guest inclusion complexes, methods of making the same and related materials  
 IN Buchanan, Charles M.; Falling, Steven N.; Lambert, Juanelle L.; Large, Shannon E.; Szejtli, Jozsef; Szenté, Lajos; Jicsinszky, Laszlo  
 PA Eastman Chemical Company, USA  
 SO PCT Int. Appl., 62 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 IC ICM C08B  
 CC 44-6 (Industrial Carbohydrates)  
 FAN.CNT 1

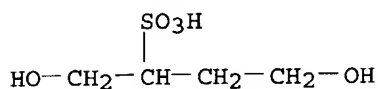
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002055562	A2	20020718	WO 2002-US399	20020110 <--

WO 2002055562 A3 20040401  
 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,  
 CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
 GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,  
 LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,  
 PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,  
 UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,  
 CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,  
 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  
 EP 1425311 A2 20040609 EP 2002-707412 20020110 <--  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, FI, CY, TR  
 US 2002128468 A1 20020912 US 2002-42306 20020111 <--  
 US 6610671 B2 20030826  
 US 2004054164 A1 20040318 US 2003-601877 20030624 <--  
 PRAI US 2001-261020P P 20010111 <--  
 WO 2002-US399 W 20020110  
 US 2002-42306 A3 20020111

## CLASS

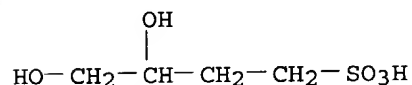
PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2002055562	ICM	C08B
US 2002128468	ECLA	C08B037/00M2B; G01N030/48A1 <--
US 2004054164	ECLA	C08B037/00M2B2; C08B037/00M2B; G01N030/48A1 <--
AB		The cyclodextrin derivs. useful for inclusion complex formation are cyclodextrin compds. bearing hydroxybutenyl substituents which have been sulfonated. The introduction of the hydroxybutenyl ether groups is done by etherification with epoxy-1-butene and the sulfonation of the resulting ether is done with sulfonating agent, e.g., Na2S2O5, in water while controlling the pH at 7.3-7.6 for improving yield.
ST		inclusion complex formation cyclodextrin hydroxybutenyl sulfonate manuf
IT		Inclusion compounds RL: IMF (Industrial manufacture); PREP (Preparation) (cyclodextrin sulfonates, guest inclusion complexes, methods of making same and related materials)
IT		930-22-3DP, 3,4-Epoxy-1-butene, oligomer, sulfonates RL: IMF (Industrial manufacture); PREP (Preparation) (cyclodextrin sulfonates, guest inclusion complexes, methods of making same and related materials)
IT		442520-95-8P 442520-96-9P RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent) (intermediate; cyclodextrin sulfonates, guest inclusion complexes, methods of making same and related materials)
IT		35430-88-7P, Sodium 1,4-dihydroxybutane-2-sulfonate 442520-94-7P RL: IMF (Industrial manufacture); PREP (Preparation) (model compound; cyclodextrin sulfonates, guest inclusion complexes, methods of making same and related materials)
IT		497-06-3, 3,4-Dihydroxy-1-butene RL: RCT (Reactant); RACT (Reactant or reagent) (model compound; cyclodextrin sulfonates, guest inclusion complexes, methods of making same and related materials)
IT		442520-95-8DP, sulfonated products RL: IMF (Industrial manufacture); PREP (Preparation) (product; cyclodextrin sulfonates, guest inclusion complexes, methods of making same and related materials)
IT		930-22-3, 3,4-Epoxy-1-butene 7585-39-9, $\beta$ -Cyclodextrin 10016-20-3, $\alpha$ -Cyclodextrin RL: RCT (Reactant); RACT (Reactant or reagent) (reactant; cyclodextrin sulfonates, guest inclusion complexes, methods of making same and related materials)

IT 35430-88-7P, Sodium 1,4-dihydroxybutane-2-sulfonate  
 442520-94-7P  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (model compound; cyclodextrin sulfonates, guest inclusion complexes,  
 methods of making same and related materials)  
 RN 35430-88-7 HCAPLUS  
 CN 2-Butanesulfonic acid, 1,4-dihydroxy-, monosodium salt (9CI) (CA INDEX  
 NAME)



● Na

RN 442520-94-7 HCAPLUS  
 CN 1-Butanesulfonic acid, 3,4-dihydroxy-, monosodium salt (9CI) (CA INDEX  
 NAME)



● Na

L44 ANSWER 2 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1998:1322 HCAPLUS  
 DN 128:89262  
 ED Entered STN: 02 Jan 1998  
 TI Functional group-terminated polymers containing sulfonate groups via  
 polymerization of sulfonated monomers  
 IN Chang, Wally L.  
 PA Witco Corp., USA  
 SO U.S., 9 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 IC ICM C08G063-68  
 NCL 524603000  
 CC 35-5 (Chemistry of Synthetic High Polymers)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5698626	A	19971216	US 1996-768662	19961218 <--
	CA 2222437	AA	19980618	CA 1997-2222437	19971126 <--
	SG 77613	A1	20010116	SG 1997-4174	19971128 <--
	TW 482796	B	20020411	TW 1997-86118181	19971203 <--
	EP 850969	A1	19980701	EP 1997-121882	19971211 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	CN 1185452	A	19980624	CN 1997-108800	19971218 <--
PRAI	US 1996-768662	A	19961218	<--	

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

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US 5698626 ICM C08G063-68  
NCL 524603000

EP 850969 ECLA C08G063/685D2 <--

AB Water-dispersible polymers, particularly condensation polymers such as polyesters, and polyamides, are prepared by sulfonating an ethylenically unsatd. monomeric precursor and then condensation polymerizing the sulfonated precursor with a second monomer. 2-(Sodiosulfo)-1,4-butanedioic acid was prepared from maleic anhydride and sodium bisulfite, then polymerized with adipic acid, 1,6-hexanediol, and neopentyl glycol to give a water-dispersible polyester.

ST sulfonate contg polymer water dispersible; water dispersible polyester sulfonate; sodiosulfobutanedioic acid polyester

IT Polyesters, preparation  
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)  
(functional group-terminated polymers containing sulfonate groups via polymerization of sulfonated monomers)

IT 168318-04-5P 178274-15-2P 200567-63-1P 200567-64-2P 200567-65-3P  
200567-66-4P 200818-08-2P 200818-09-3P 200960-00-5P  
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)  
(functional group-terminated polymers containing sulfonate groups via polymerization of sulfonated monomers)

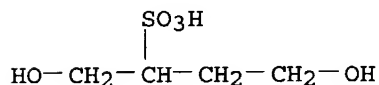
IT 29454-16-8P 35430-88-7P 102678-99-9P 200716-10-5P  
200716-11-6P  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT  
(Reactant or reagent)  
(functional group-terminated polymers containing sulfonate groups via polymerization of sulfonated monomers)

IT 108-31-6, 2,5-Furandione, reactions 110-64-5, 2-Butene-1,4-diol  
7631-90-5, Sodium Bisulfite  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(functional group-terminated polymers containing sulfonate groups via polymerization of sulfonated monomers)

IT 35430-88-7P  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT  
(Reactant or reagent)  
(functional group-terminated polymers containing sulfonate groups via polymerization of sulfonated monomers)

RN 35430-88-7 HCAPLUS

CN 2-Butanesulfonic acid, 1,4-dihydroxy-, monosodium salt (9CI) (CA INDEX NAME)



● Na

L44 ANSWER 3 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 1997:667018 HCAPLUS  
DN 127:339517  
ED Entered STN: 20 Oct 1997  
TI Crystal structure of (2R,3S)-3-O-benzyl-2-benzylamino-3,4-dihydroxybutane nitrile, C18H20N2O2  
AU Henkel, S.; Meunier, N.; Jager, V.  
CS Institut Organische Chemie, Universitat Stuttgart, Stuttgart, D-70569, Germany  
SO Zeitschrift fuer Kristallographie - New Crystal Structures (1997)



), 212(2), 221-222  
CODEN: ZKNSFT; ISSN: 1433-7266  
PB Oldenbourg  
DT Journal  
LA English  
CC 75-8 (Crystallography and Liquid Crystals)  
AB The title compound is orthorhombic, space group P212121, a 5.567(1), b 9.731(2), c 30.540(7) Å, Z = 4, R = 0.075, Rw = 0.133 for 1439 reflections. Atomic coordinates are given. In the crystal exist 2 intermol. H bridges from NH/OH pairing of neighboring mols.  
ST mol structure benzyl benzylamino hydroxy butanenitrile  
IT Crystal structure  
Molecular structure  
(of benzyl(benzylamino)dihydroxybutanenitrile)  
IT 198014-93-6  
RL: PRP (Properties)  
(crystal and mol. structure of)

L44 ANSWER 4 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 1996:612391 HCAPLUS  
DN 125:339808  
ED Entered STN: 14 Oct 1996  
TI Competitive interactions of phenol derivatives and aliphatic alcohols for alkenyl and diol silica surfaces  
AU Gilpin, R. K.; Asif, M.; Jaroniec, M.; Lin, S.  
CS Department Chemistry, Kent State University, Kent, OH, 44242, USA  
SO Journal of Liquid Chromatography & Related Technologies (1996), 19(17&18), 2811-2827  
CODEN: JLCTFC; ISSN: 1082-6076  
PB Dekker  
DT Journal  
LA English  
CC 66-4 (Surface Chemistry and Colloids)  
Section cross-reference(s): 38, 69, 80  
AB A thermodyn. equation was used to analyze the retention behavior of phenolic solutes at low modifier concns. on alkenyl and diol chemical modified silica packings. These materials were prepared by attaching alkenyl and diol ligands with 4, 6, 8, and 10 carbon atoms to the surface of LiChrosorb Si-60 silica. The thermodyn. anal. of the capacity ratios of various phenolic solutes measured at different concns. of simple aliphatic alcs. (used as modifiers) in hexane have provided information about solute and solvent interactions with the alkenyl and diol modified silicas. This anal. shows that the solute-alc. competitive interaction for the alkenyl bonded phases changes significantly with chain length, while this effect is not observed for the diol phases. Also, the influence of polarity and geometric structure of functional groups on solute retention were examined  
ST chromatog silica alkenyl diol modified retention; phenol chromatog retention alkenyl diol silica  
IT Alcohols, properties  
RL: ARU (Analytical role, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); ANST (Analytical study); PROC (Process)  
(mobile phase; thermodyn. equation for phenolic solute chromatog. retention at low modifier concns. on alkenyl- and diol-modified silica packing)  
IT Alkenes, properties  
Glycols, properties  
RL: ARU (Analytical role, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); PROC (Process)  
(reaction products with silica, surface; thermodyn. equation for phenolic solute chromatog. retention at low modifier concns. on alkenyl- and diol-modified silica packing)

- IT Chains, chemical  
Chromatography, column and liquid  
Polarity  
(thermodn. equation for phenolic solute chromatog. retention at low  
modifier concns. on alkenyl- and diol-modified silica packing)
- IT Phenols, properties  
RL: ANT (Analyte); PEP (Physical, engineering or chemical process); PRP  
(Properties); ANST (Analytical study); PROC (Process)  
(thermodn. equation for phenolic solute chromatog. retention at low  
modifier concns. on alkenyl- and diol-modified silica packing)
- IT Silica gel, properties  
RL: ARU (Analytical role, unclassified); PEP (Physical, engineering or  
chemical process); PRP (Properties); ANST (Analytical study); PROC  
(Process)  
(thermodn. equation for phenolic solute chromatog. retention at low  
modifier concns. on alkenyl- and diol-modified silica packing)
- IT Silanes  
RL: ARU (Analytical role, unclassified); PEP (Physical, engineering or  
chemical process); PRP (Properties); SPN (Synthetic preparation); ANST  
(Analytical study); PREP (Preparation); PROC (Process)  
(alkenyl, thermodn. equation for phenolic solute chromatog. retention  
at low modifier concns. on alkenyl- and diol-modified silica packing)
- IT 64-17-5, Ethanol, properties 67-56-1, Methanol, properties 67-63-0,  
2-Propanol, properties 71-23-8, 1-Propanol, properties 71-36-3,  
1-Butanol, properties 78-92-2, 2-Butanol 110-54-3, Hexane, properties  
RL: ARU (Analytical role, unclassified); PEP (Physical, engineering or  
chemical process); PRP (Properties); ANST (Analytical study); PROC  
(Process)  
(mobile phase; thermodn. equation for phenolic solute chromatog.  
retention at low modifier concns. on alkenyl- and diol-modified silica  
packing)
- IT 7631-86-9P, Silica, properties  
RL: ARU (Analytical role, unclassified); PEP (Physical, engineering or  
chemical process); PRP (Properties); SPN (Synthetic preparation); ANST  
(Analytical study); PREP (Preparation); PROC (Process)  
(reaction products, surface; thermodn. equation for phenolic solute  
chromatog. retention at low modifier concns. on alkenyl- and  
diol-modified silica packing)
- IT 584-03-2DP, 3,4-Dihydroxybutane, reaction  
products 1117-86-8DP, 7,8-Dihydroxyoctane, reaction products  
1119-86-4DP, 9,10-Dihydroxydecane, reaction products 6920-22-5DP,  
5,6-Dihydroxyhexane, reaction products 52034-14-7DP,  
5-Hexenyltriethoxysilane, reaction products 52217-55-7DP,  
7-Octenyltriethoxysilane, reaction products 57813-67-9DP,  
3-Butenyltriethoxysilane, reaction products 152222-61-2DP,  
9-Decenyltriethoxysilane, reaction products  
RL: ARU (Analytical role, unclassified); PEP (Physical, engineering or  
chemical process); PRP (Properties); SPN (Synthetic preparation); ANST  
(Analytical study); PREP (Preparation); PROC (Process)  
(surface; thermodn. equation for phenolic solute chromatog. retention  
at low modifier concns. on alkenyl- and diol-modified silica packing)
- IT 2279-96-1, Persuccinic acid  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(thermodn. equation for phenolic solute chromatog. retention at low  
modifier concns. on alkenyl- and diol-modified silica packing)

L44 ANSWER 5 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 1991:655625 HCAPLUS  
DN 115:255625  
ED Entered STN: 14 Dec 1991  
TI Vinylpoly ether alcohols  
IN Fischer, Martin; Baur, Richard; Diessel, Paul  
PA BASF A.-G., Germany

SO Ger. Offen., 6 pp.

CODEN: GWXXBX

DT Patent

LA German

IC ICM C07C043-178

ICS C08G065-32; C11D001-29; B01F017-42; B01F017-04; A61K007-50;  
A61K007-48

CC 23-9 (Aliphatic Compounds)

Section cross-reference(s): 35, 46

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 4004883	A1	19910822	DE 1990-4004883	19900216 <--
	EP 447778	A2	19910925	EP 1991-101649	19910207 <--
	EP 447778	A3	19911204		
	EP 447778	B1	19951018		
	R: CH, DE, FR, GB, IT, LI				
	US 5162590	A	19921110	US 1991-651958	19910207 <--
	CA 2036070	AA	19910817	CA 1991-2036070	19910211 <--
	JP 05017385	A2	19930126	JP 1991-20881	19910214 <--
PRAI	DE 1990-4004883		19900216	<--	

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 4004883	ICM	C07C043-178
	ICS	C08G065-32; C11D001-29; B01F017-42; B01F017-04; A61K007-50; A61K007-48

OS MARPAT 115:255625

AB Vinylpoly ether alcs. R(OA)nOCH<sub>2</sub>CH(OH)CH:CH<sub>2</sub> (I; R = C1-25-alkyl, C2-25-alkenyl, C<20-alkylaryl; A = C2-4-alkylidene-1,2-yl; n = 1-20) are claimed. A process for their preparation comprises the treatment of polyether alcs. vinyl oxirane in the presence of base. A process for the preparation of polyether sulfonates R(OA)nOCH<sub>2</sub>CH(OH)CH<sub>2</sub>CH<sub>2</sub>SO<sub>3</sub>M (II; same A, R, n; M = alkali metal, ammonium) comprises the treatment of I with an alkali or ammonium sulfite, hydrogensulfite, or disulfite, or their mixts. Detergents and body cleansing agents containing 1-50% by weight II as surface active agent are claimed. C13/C15-alcs. formed in an oxo process were treated with 5 mol ethylene oxide and the resulting reaction product was treated with 30% MeOH/NaOMe (2.4 g) and to this was added 31 g vinylloxirane to give 100% vinyl polyether alc. (cloud point at 52° according to DIN 53 917); the latter was dissolved in EtOH (335 mL) and H<sub>2</sub>O (130 mL) and treated with NaHSO<sub>3</sub> (30.3 g) and Na<sub>2</sub>SO<sub>3</sub> (17.8 g) in 80 mL H<sub>2</sub>O to give 100% polyether sulfonate. Thus, 1 g polyether sulfonate dissolved in 100 mL H<sub>2</sub>O to give a clear solution; it had a surface tension of 28.4 mN/m, foaming power 170 mL, and wetting ability of 35 s at 25°. I and II possess a good ability to lower surface tension but foam less than, e.g., comparable polyether sulfates.

ST vinylpoly ether alkyl sulfonate; detergent vinylpoly ether alkyl sulfonate; cleanser vinylpoly ether alkyl sulfonate; surfactant vinylpoly ether alkyl sulfonate; polyoxyalkylene alkyl sulfo terminated surfactant; polyether alkyl sulfo terminated surfactant

IT Polyoxyalkylenes, preparation

RL: SPN (Synthetic preparation); PREP (Preparation)  
(C1-25-alkyl and (hydroxybutenyl)-terminated, preparation of, as surfactants)

IT Detergents

(C1-25-alkyl- and sulfo-terminated polyoxyalkylenes and C1-25-alkyl- and (hydroxybutenyl)-terminated polyoxyalkylenes)

IT Alcohols, compounds

RL: SPN (Synthetic preparation); PREP (Preparation)

(C13-15, ethoxylated, reaction products with vinyl oxirane, preparation of, as surfactant)

IT Alcohols, compounds

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (C>13, ethoxylated, reaction products with vinyl oxirane, preparation of, as surfactant)

IT Alcohols, compounds  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (C10, ethoxylated, reaction products with vinyl oxirane, preparation of, as surfactant)

IT Polyoxyalkylenes, preparation  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (alkyl- and sulfo-terminated, preparation of, as surfactant)

IT Surfactants  
 (anionic, C1-25-alkyl- and sulfo-terminated polyoxyalkylenes and C1-25-alkyl- and (hydroxybutenyl)-terminated polyoxyalkylenes)

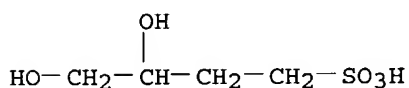
IT Polyoxyalkylenes, preparation  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (sulfo-terminated, C13/C15-alkyl and, preparation of, as surfactant)

IT 497-06-3DP, 3-Butene-1,2-diol, alkoxyated 930-22-3DP, Vinyl oxirane, reaction products with ethoxylated C13-15-alcs. 137349-92-9DP, alkoxyated  
 RL: PREP (Preparation)  
 (preparation of, as surfactant)

IT 137349-92-9DP, alkoxyated  
 RL: PREP (Preparation)  
 (preparation of, as surfactant)

RN 137349-92-9 HCAPLUS

CN 1-Butanesulfonic acid, 3,4-dihydroxy- (9CI) (CA INDEX NAME)



L44 ANSWER 6 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1990:630622 HCAPLUS

DN 113:230622

ED Entered STN: 22 Dec 1990

TI Mechanisms of peroxide decomposition. An ESR study of the reactions of the peroxomonosulfate anion (HOOSO<sub>3</sub><sup>-</sup>) with titanium(III), iron(II), and α-oxygen substituted radicals

AU Gilbert, Bruce C.; Stell, Jonathan K.

CS Dep. Chem., Univ. York, Heslington/York, YO1 5DD, UK

SO Journal of the Chemical Society, Perkin Transactions 2: Physical Organic Chemistry (1972-1999) (1990), (8), 1281-8

CODEN: JCPKBH; ISSN: 0300-9580

DT Journal

LA English

CC 22-8 (Physical Organic Chemistry)

AB It is shown that decomposition of the peroxymonosulfate anion (HOOSO<sub>3</sub><sup>-</sup>) in aqueous

solution with the low-valence metal ions Ti(III) and Fe(II) proceeds via 1-electron transfer to yield SO<sub>4</sub><sup>-</sup> and OH<sup>-</sup> (rather than SO<sub>4</sub><sup>2-</sup> and .OH), with rate consts. in the range 10<sup>2</sup>-10<sup>5</sup> dm<sup>3</sup>/mol/s. A variety of subsequent reactions of SO<sub>4</sub><sup>-</sup> with added substrates was demonstrated. ESR results also reveal the efficacy of HOOSO<sub>3</sub><sup>-</sup> as an oxidant for C-centered radicals generated in situ. In addition to the occurrence of rapid 1-electron oxidation of alkyl radicals (e.g. Et., with k 3.8 × 10<sup>5</sup> dm<sup>3</sup>/mol/s), it is also established that certain O-conjugated radicals undergo a novel oxidation involving O-transfer and subsequent fragmentation (.CHMeOH gives Me., with k 1.1 × 10<sup>6</sup> dm<sup>3</sup>/mol/s).

ST peroxide decompn; peroxomonosulfate anion radical decompn; titanium peroxomonosulfate anion radical decompn; iron peroxomonosulfate anion

- radical decompn  
IT Kinetics of oxidation  
Oxidation  
(of free radicals, from peroxomonosulfate anion)
- IT Kinetics of photolysis  
Photolysis  
(of peroxomonosulfate anion, in presence of ethanol)
- IT Alcohols, reactions  
Alkenes, reactions  
Carboxylic acids, reactions  
Ethers, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(titanium(III)-peroxomonosulfate anion couple with)
- IT 130538-80-6P 130538-81-7P **130538-82-8P** 130538-83-9P  
130538-84-0P **130538-85-1P** 130538-86-2P 130538-87-3P  
130538-88-4P 130558-17-7P  
RL: FORM (Formation, nonpreparative); PREP (Preparation)  
(formation of, from reaction of titanium(III) peroxomonosulfate anion couple with aliphatic alkene)
- IT 2229-06-3P 4598-47-4P, 1,4-Dioxan-2-yl 4598-48-5P 4617-62-3P  
17031-85-5P 17031-87-7P 19426-60-9P 20369-99-7P  
RL: FORM (Formation, nonpreparative); PREP (Preparation)  
(formation of, from reaction of titanium(III)-peroxomonosulfate anion couple with ethers)
- IT 4422-54-2P 5723-74-0P 5723-75-1P 6154-13-8P 7055-10-9P  
7233-59-2P 7277-18-1P 16481-30-4P 54495-69-1P 57643-17-1P  
98603-39-5P 106707-31-7P 130538-90-8P 130538-91-9P 130538-92-0P  
130538-93-1P  
RL: FORM (Formation, nonpreparative); PREP (Preparation)  
(formation of, from reaction of titanium(III)-peroxomonosulfate anion with alcs.)
- IT 3313-57-3P 4400-01-5P 17525-93-8P 32073-91-9P 91588-81-7P  
RL: FORM (Formation, nonpreparative); PREP (Preparation)  
(formation of, from reaction of titanium(III)-peroxomonosulfate anion with ethers)
- IT 17203-53-1P 71937-54-7P  
RL: FORM (Formation, nonpreparative); PREP (Preparation)  
(formation of, from reactions of titanium(III)-peroxomonosulfate anion with ethers)
- IT 2025-56-1P, Ethyl 2229-07-4P, Methyl 2597-39-9P 2887-38-9P  
2887-43-6P 2887-46-9P 15671-30-4P 26299-74-1P 130538-89-5P  
130558-18-8P  
RL: FORM (Formation, nonpreparative); PREP (Preparation)  
(formation of, from titanium(III) peroxomonosulfate anion couple with carboxylic acid)
- IT 2025-55-0P  
RL: FORM (Formation, nonpreparative); PREP (Preparation)  
(formation of, from titanium(III) peroxomonosulfate anion reaction with alcs. and carboxylic acid)
- IT 2348-46-1P 2597-43-5P 5131-95-3P 5723-77-3P 7233-58-1P  
14457-93-3P 25088-23-7P 36730-41-3P 50781-23-2P 93824-68-1P  
106707-30-6P  
RL: FORM (Formation, nonpreparative); PREP (Preparation)  
(formation of, from titanium(III)-peroxomonosulfate anion couple with aliphatic alc.)
- IT 14915-07-2, Peroxide  
RL: PRP (Properties)  
(reaction kinetics of titanium complexes with, decomposition in relation to)
- IT 12026-77-6, Titanium hydroxide (Ti(OH)<sub>3</sub>) 71414-93-2 77704-13-3  
130293-70-8  
RL: PRP (Properties)  
(reaction kinetics of, with peroxomonosulfate anion radical and hydrogen peroxide)

IT 15438-31-0, reactions 22541-75-9, Titanium(III), reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of peroxomonosulfate anion radical with)

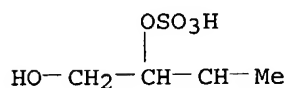
IT 3724-65-0, 2-Butenoic acid 6117-91-5, 2-Buten-1-ol 6915-18-0,  
 2-Butenedioic acid 7407-59-2  
 RL: PRP (Properties)  
 (reaction of titanium(III)-peroxomonosulfate anion couple with,  
 radicals from)

IT 60-29-7, Diethyl ether, reactions 64-17-5, Ethanol, reactions 64-19-7,  
 Acetic acid, reactions 67-56-1, Methanol, reactions 67-63-0,  
 2-Propanol, reactions 71-23-8, Propanol, reactions 75-65-0, reactions  
 75-84-3 75-98-9 78-83-1, reactions 78-92-2, 2-Butanol 79-09-4,  
 Propanoic acid, reactions 79-31-2 96-41-3, Cyclopentanol 107-01-7,  
 2-Butene 107-18-6, 2-Propen-1-ol, reactions 107-21-1, 1,2-Ethanediol,  
 reactions 108-20-3, Diisopropyl ether 109-86-4 109-99-9, reactions  
 110-63-4, 1,4-Butanediol, reactions 110-64-5, 2-Butene-1,4-diol  
 110-71-4, 1,2-Dimethoxyethane 115-11-7, reactions 122-97-4,  
 3-Phenylpropanol 123-91-1, 1,4-Dioxane, reactions 513-42-8,  
 2-Methyl-2-propen-1-ol 584-02-1, 3-Pentanol  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of titanium(III)-peroxomonosulfate anion couple with,  
 radicals from)

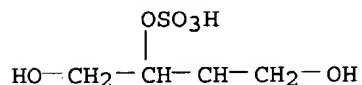
IT 12188-01-1  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reactions of, with titanium(III) and iron(II) and  $\alpha$ -oxygen  
 substituted radicals)

IT 130538-82-8P 130538-85-1P  
 RL: FORM (Formation, nonpreparative); PREP (Preparation)  
 (formation of, from reaction of titanium(III) peroxomonosulfate anion  
 couple with aliphatic alkene)

RN 130538-82-8 HCAPLUS  
 CN Propyl, 3-hydroxy-1-methyl-2-(sulfooxy)- (9CI) (CA INDEX NAME)



RN 130538-85-1 HCAPLUS  
 CN Propyl, 3-hydroxy-1-(hydroxymethyl)-2-(sulfooxy)- (9CI) (CA INDEX NAME)



L44 ANSWER 7 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1990:607849 HCAPLUS  
 DN 113:207849  
 ED Entered STN: 08 Dec 1990  
 TI Hydrogel dye film sensing elements and their preparation  
 IN Boesterling, Bernhard J.; Chang, Daniel M.; Madonik, Alex M.; Stone,  
 Robert T.  
 PA Nellcor, Inc., USA  
 SO PCT Int. Appl., 85 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 IC ICM C08G018-32  
 ICS C08G018-38; G01N021-78; G01N033-50

CC 9-1 (Biochemical Methods)

Section cross-reference(s): 35, 41

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9000572	A1	19900125	WO 1989-US3015	19890710 <--
	W: AU, BB, BG, BR, DK, FI, HU, JP, KP, KR, LK, MC, MG, MW, NO, RO, SD, SU				
	RW: AT, BE, BF, BJ, CF, CG, CH, CM, DE, FR, GA, GB, IT, LU, ML, MR, NL, SE, SN, TD, TG				
	AU 8939653	A1	19900205	AU 1989-39653	19890710 <--
	EP 406334	A1	19910109	EP 1989-908107	19890710 <--
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
PRAI	US 1988-217413		19880711	<--	
	WO 1989-US3015		19890710	<--	

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9000572	ICM	C08G018-32
	ICS	C08G018-38; G01N021-78; G01N033-50

OS MARPAT 113:207849

AB Reactive azo dyes R2N:NR3R4 or R4R2N:NR3 [R2 = (un)substituted Ph or naphthyl or C2-12 heterocyclyl aromatic radical; R3 = sulfonated naphthol or aminonaphthol; R4 is a reactive substituent capable of binding the dye mol. to a polymeric substrate without affecting the pH-indicating character of the dye] are prepared. The dyes have a pKa of 6-8 and exhibit visible light absorbance that reversibly shifts as a function of pH. Also prepared are hydrogels and dye films incorporating the dyes and hydrogels. Sensing elements incorporating the dye films are described. The sensing elements are useful e.g. in body fluid analyzers for determination of pH or

pCO2 in e.g. blood. Thus, the diazonium salt of 2-bromo-4,6-dinitroaniline was reacted with Na 4-(2-bromoacrylamido)-5-hydroxynaphthalenesulfonate (preparation given), and the product was further reacted with Tris to form a reactive dye which was used, along with polyurethane hydrogel, to prepare a dye film. A multilayer sensing element incorporating the dye films of the invention is described, as is a body-fluid anal. apparatus for its use.

ST multilayer sensor element dye hydrogel; reactive azo dye hydrogel test element; film hydrogel dye optical sensor element; polyurethane azo dye film optical sensor

IT Body fluid  
(anal. of, polyurethane hydrogel dye film preparation for sensing element for)

IT Carbon black, uses and miscellaneous  
RL: USES (Uses)  
(as light-absorbing pigment, in multilayer sensing element with azo dye-reacted hydrogel)

IT pH  
(determination of, multilayer element with azo dye-reacted hydrogel for)

IT Siloxanes and Silicones, uses and miscellaneous  
RL: USES (Uses)  
(in multilayer sensing element with azo dye-reacted hydrogel film)

IT Pigments  
(light-reflecting and -absorbing, in multilayer sensing element with azo dye-reacted hydrogel film)

IT Films  
(of azo dye-reacted hydrogel, for multilayer sensing element)

IT Indicators  
(acid-base, azo dye reacted with hydrogel as, in multilayer sensing element)

IT Dyes, reactive  
(azo, hydrogel reaction products, preparation of, for multilayer sensing element)

- IT Urethane polymers, uses and miscellaneous  
RL: USES (Uses)  
(carboxy-containing, hydrogel dye film containing, for multilayer sensing element)
- IT Gels  
(hydro-, polyurethane, reaction products with azo dyes, for multilayer sensor element)
- IT Urethane polymers, uses and miscellaneous  
RL: USES (Uses)  
(phosphate group-containing, hydrogel dye film containing, for multilayer sensing element)
- IT Urethane polymers, uses and miscellaneous  
RL: USES (Uses)  
(quaternary ammonium group-containing, polyurethane hydrogel dye film containing  
polymer units derived from polyisocyanate and, for multilayer sensing element)
- IT Urethane polymers, compounds  
RL: ANST (Analytical study)  
(reaction products, with azo dyes, hydrogels, for multilayer sensor element)
- IT Urethane polymers, uses and miscellaneous  
RL: USES (Uses)  
(sulfo-containing, hydrogel dye film containing, for multilayer sensing element)
- IT Urethane polymers, compounds  
RL: ANST (Analytical study)  
(thio-, reaction products, with azo dye, hydrogels, for multilayer sensor element)
- IT 13463-67-7, Titanium dioxide, uses and miscellaneous  
RL: USES (Uses)  
(as light-reflecting pigment, in multilayer sensing element containing azo dye-reacted hydrogel)
- IT 124-38-9, Carbon dioxide, analysis  
RL: ANT (Analyte); ANST (Analytical study)  
(determination of, multilayer element with azo dye-reacted hydrogel for)
- IT 91-08-7D, polymers with azo dyes and glycols 101-68-8D, polymers with azo dyes and glycols 104-49-4D, polymers with azo dyes and glycols 822-06-0D, Hexamethylene diisocyanate, polymers with azo dyes and glycols 1014-98-8D, p-Xylylene diisocyanate, polymers with azo dyes and glycols 2470-48-6D, polymers with azo dyes and glycols 2556-36-7D, 1,4-Cyclohexane diisocyanate, polymers with azo dyes and glycols 4538-37-8D, Tetramethylene diisocyanate, polymers with azo dyes and glycols 10347-54-3D, polymers with azo dyes and glycols 26471-62-5D, polymers with azo dyes and glycols 29305-29-1D, polymers with azo dyes and glycols 38661-72-2D, polymers with azo dyes and glycols 95034-19-8D, 1,4-Pentane diisocyanate, polymers with azo dyes and glycols 99086-34-7D, polymers with azo dyes and glycols 128911-85-3D, polymers with azo dyes and glycols 128911-86-4D, polymers with azo dyes and glycols  
RL: ANST (Analytical study)  
(films, for multilayer sensor element)
- IT 27919-24-0D, polymers with azo dyes and isocyanates 96573-91-0D, polymers with azo dyes and isocyanates  
RL: ANST (Analytical study)  
(for multilayer sensor element)
- IT 83-64-7 87-02-5 90-20-0 90-40-4 90-51-7 6399-72-0 68391-50-4 128911-80-8 128911-82-0 128911-84-2  
RL: ANST (Analytical study)  
(in azo dye preparation, for dye-reacted hydrogel for multilayer sensor element)
- IT 12408-02-5  
RL: ANST (Analytical study)



(pH, determination of, multilayer element with azo dye-reacted hydrogel for)

IT 9042-77-7P, Polyethylene glycol-toluene diisocyanate copolymer  
 10191-18-1DP, methylated, polymers with PEG, TMP and TDI 53426-99-6P  
 83259-69-2P 128724-54-9P 128911-87-5P 128911-88-6P 128911-89-7P  
 128911-90-0P 128911-91-1P 128911-92-2P 128911-93-3P 128911-94-4P  
 128911-95-5P 128911-96-6P 128911-97-7P 128911-98-8P 128911-99-9P  
 128912-00-5P 128912-01-6P 128912-02-7P 128912-03-8P 128912-04-9P  
 128912-05-0P 128912-06-1P 128912-08-3P 128912-09-4P 128912-10-7P  
 128912-11-8P 128912-12-9P 128912-13-0P 128912-14-1P 128912-21-0P  
 128912-22-1P 128912-24-3P 128912-25-4P 128912-26-5P 128912-28-7P  
 128912-30-1P 128912-31-2P 128912-32-3P 128912-33-4P 128912-34-5P  
 128912-35-6P 128912-36-7P 128912-37-8P 128912-38-9P 128932-71-8P  
 128932-72-9P 128932-73-0P 128932-74-1P 128932-75-2P 128932-76-3P  
 128932-77-4P 128932-78-5P 128932-79-6P 128932-80-9P 128932-81-0P  
 128932-82-1P 128932-83-2P 128932-85-4P 128932-86-5P 128967-22-6P  
 128996-83-8P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of, for polyurethane hydrogel dye film preparation for  
 multilayer  
 sensing element)

IT 128912-08-3DP, reaction products with PEG 128912-10-7DP, reaction  
 products with PEG 128912-15-2DP, reaction products with PEG  
 128912-16-3DP, reaction products with PEG 128912-17-4DP, reaction  
 products with PEG 128912-18-5DP, reaction products with PEG  
 128912-19-6DP, reaction products with PEG 128912-20-9DP, reaction  
 products with PEG 128932-72-9DP, reaction products with PEG  
 128932-73-0DP, reaction products with PEG 128932-74-1DP, reaction  
 products with PEG 128932-84-3DP, reaction products with PEG  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of, for polyurethane hydrogel dye film preparation, for  
 multilayer  
 pH sensing element)

IT 25322-68-3DP, reaction products with reactive azo dyes 54986-73-1DP,  
 Desmodur IL, reaction products with dye and PEG 128932-77-4P  
 128967-23-7P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of, for polyurethane hydrogel dye film preparation, for  
 multilayer  
 sensing element)

IT 66992-27-6  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, in polyurethane hydrogel dye film preparation for multilayer  
 sensing element)

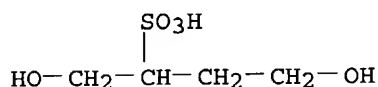
IT 35430-88-7, Sodium 1,4-butanediol-2-sulfonate  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, in polyurethane hydrogel dye film preparation, for multilayer  
 sensing element)

IT 74-89-5, Methanamine, reactions 77-86-1 97-02-9, 2,4-Dinitroaniline  
 108-30-5, reactions 109-83-1 111-42-2, reactions 141-43-5, reactions  
 367-78-2 444-41-7 445-66-9 606-22-4, 2,6-Dinitroaniline 776-34-1  
 1817-73-8, 2-Bromo-4,6-dinitroaniline 3531-19-9, 2-Chloro-4,6-  
 dinitroaniline 17420-30-3, 5-Nitroanthranilonitrile 17601-94-4,  
 2-Bromo-6-cyano-4-nitroaniline 18791-02-1 22118-09-8, Bromoacetyl  
 chloride 30559-54-7 54321-79-8 128912-07-2  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, in reactive azo dye preparation for polyurethane hydrogel dye  
 film, for multilayer sensing element)

IT 280-57-9P, 1,4-Diazabicyclo[2.2.2]octane  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (reaction of, with glycine, for polyurethane hydrogel dye film preparation,  
 for multilayer sensing element)

IT 56-40-6P, Glycine, reactions

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (reaction of, with reactive azo dye, for polyurethane hydrogel dye film preparation, for multilayer sensing element)  
 IT 35430-88-7, Sodium 1,4-butanediol-2-sulfonate  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, in polyurethane hydrogel dye film preparation, for multilayer sensing element)  
 RN 35430-88-7 HCAPLUS  
 CN 2-Butanesulfonic acid, 1,4-dihydroxy-, monosodium salt (9CI) (CA INDEX NAME)



● Na

L44 ANSWER 8 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1986:150046 HCAPLUS  
 DN 104:150046  
 ED Entered STN: 03 May 1986  
 TI Sulfur-containing poly(ether urethanes) and their use  
 IN Hentschel, Karl Heinz; Kussi, Siegfried; Botsch, Hans Juergen  
 PA Bayer A.-G. , Fed. Rep. Ger.  
 SO Ger. Offen., 41 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 IC ICM C08G018-38  
 ICS C08G018-66; C08G018-48; C08G018-50; C10M151-04; C10M173-00;  
 C10N040-08; C10N040-22  
 CC 37-3 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 51  
 FAN.CNT 1

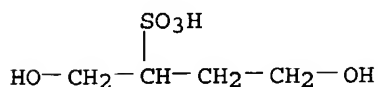
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3415178	A1	19851031	DE 1984-3415178	19840421 <--
EP 162261	A1	19851127	EP 1985-104252	19850409 <--
EP 162261	B1	19870819		
R: BE, DE, FR, GB, IT, NL				
JP 60233122	A2	19851119	JP 1985-80424	19850417 <--
US 4666618	A	19870519	US 1985-724373	19850418 <--
BR 8501877	A	19851217	BR 1985-1877	19850419 <--
PRAI DE 1984-3415178		19840421	<--	

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 3415178	ICM	C08G018-38
	ICS	C08G018-66; C08G018-48; C08G018-50; C10M151-04; C10M173-00; C10N040-08; C10N040-22

AB The title polymers, useful in water-based lubricants, are prepared from polyisocyanates, the sulfides HOC(R1)(R2)C(R3)(R4)SxC(R5)(R6)C(R7)(R8)OH (R1-8 = H, C1-10 alkyl; x = 1.5-4), and, optionally, other polyols and/or polyamines. Thus, heating polyethylene glycol (mol. weight 3000) 258, oxypropylated Na 1,4-dihydroxy-2-butanedisulfonate 6, 2,2'-trithiodiethanol 167.4, and TDI 174 g in 2566 g MEK at 80° for 2 h and adding the solution dropwise to 908 g H2O at 50°/500-650 mbar gave a 28.4% aqueous

- solution of polyurethane with S content 15.2%, OH number 97 mg KOH/g, and number-average mol. weight 1155. A 2% aqueous solution of this polymer in the Almen-Wieland lubricant test had contact pressure >20 kN, friction pressure 1610 N, and temperature 78° compared with 6.5, 1400, and 46, resp., for a mineral oil emulsion.
- ST polysulfide polyurethane lubricant aq; trithiodiethanol polyurethane; sulfobutanediol oxyalkylated polyurethane; hydraulic fluid polysulfide polyurethane
- IT Hydraulic fluids  
Lubricants  
(water-based, polysulfide-polyurethanes for)
- IT Urethane polymers, preparation  
RL: PREP (Preparation)  
(polysulfide-, manufacture of, for water-based lubricants)
- IT Polysulfides  
RL: PREP (Preparation)  
(polyurethane-, manufacture of, for water-based lubricants)
- IT 105-60-2DP, reaction products with isocyanate-terminated polysulfides 1892-29-1DP, polymers with diisocyanates, oxypropylated sulfobutanediol and polyethylene glycol 4098-71-9DP, polymers with polyethylene glycol, oxypropylated sulfobutanediol and polythiodialkanols 4428-14-2DP, polymers with diisocyanates, oxypropylated sulfobutanediol and polyethylene glycol 4767-03-7DP, reaction products with isophorone diisocyanate and caprolactam, polymers with polyethylene glycol and trithiodiethanol 20203-02-5DP, polymers with diisocyanates, oxypropylated sulfobutanediol and polyethylene glycol 25322-68-3DP, polymers with oxypropylated sulfobutanediol, diisocyanates and polythiodialkanols 26471-62-5DP, polymers with polyethylene glycol, oxypropylated sulfobutanediol and polythiodialkanols 35430-88-7DP, oxypropylated, polymers with polyethylene glycol, diisocyanates and polythiodialkanols 100449-98-7DP, polymers with diisocyanates, oxypropylated sulfobutanediol and polyethylene glycol 100450-19-9DP, polymers with diisocyanates, oxypropylated sulfobutanediol and polyethylene glycol 101387-84-2DP, polymers with diisocyanates, oxypropylated sulfobutanediol and polyethylene glycol 101387-85-3DP, polymers with diisocyanates, oxypropylated sulfobutanediol and polyethylene glycol 101387-86-4DP, polymers with diisocyanates, oxypropylated sulfobutanediol and polyethylene glycol 101387-87-5DP, polymers with diisocyanates, oxypropylated sulfobutanediol and polyethylene glycol  
RL: PREP (Preparation)  
(manufacture of, for water-based lubricants)
- IT 35430-88-7DP, oxypropylated, polymers with polyethylene glycol, diisocyanates and polythiodialkanols  
RL: PREP (Preparation)  
(manufacture of, for water-based lubricants)
- RN 35430-88-7 HCAPLUS
- CN 2-Butanesulfonic acid, 1,4-dihydroxy-, monosodium salt (9CI) (CA INDEX NAME)



● Na

DN 102:205548  
 ED Entered STN: 15 Jun 1985  
 TI Polyurethane-urea stable aqueous dispersions and coatings from them  
 PA Bayer A.-G., Fed. Rep. Ger.; Mobay Chemical Corp.  
 SO Jpn. Kokai Tokkyo Koho, 27 pp.  
 CODEN: JKXXAF

DT Patent  
 LA Japanese  
 IC ICM C08G018-08  
 CC 42-10 (Coatings, Inks, and Related Products)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 60004515	A2	19850111	JP 1984-51253	19840319 <--
	JP 04000488	B4	19920107		
	US 4501852	A	19850226	US 1983-505600	19830620 <--
	EP 148970	A2	19850724	EP 1984-102014	19840227 <--
	EP 148970	A3	19860430		
	EP 148970	B1	19880107		
	R: BE, DE, FR, GB, IT, NL				
	CA 1249391	A1	19890124	CA 1984-450683	19840328 <--
PRAI	US 1983-505600		19830620	<--	

## CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 60004515	ICM	C08G018-08	
AB	Polyurethane ureas containing chemical bound anionic groups are neutralized in mixts. of volatile cations and nonvolatile cations to prepare stable aqueous dispersions. Thus, an adipic acid-1,6-hexanediol polyester diol 980.0, $\alpha,\alpha$ -dimethylolpropionic acid 58.7, 83:17 poly(oxyethylene) (oxypropylene) Bu ether 50, and N-methylpyrrolidinone (I) 483.3 parts were heated at 70°, mixed with 550.7 parts bis(4-isocyanatohexyl)methane, heated to 105° during 2 h to free NCO content 1.9%, cooled to 70°, mixed (400 parts) with NaH, Et <sub>3</sub> N, and I, added (400 parts) to 350.0 parts water at 38°, mixed with 32.1 parts water containing 4.9 parts diethylenetriamine, diluted with 100.0 parts water, and stirred 2 h at 70°. A dispersion containing 25 equivalent % Na carboxylate and 75 equivalent % triethylammonium carboxylate gave a coating having better hydrolysis and swelling resistance than a coating prepared from a dispersion containing 100 equivalent % triethylammonium carboxylate.		
ST	polyurethane urea aq dispersion coating		
IT	Surfactants (polyethylene glycol nonylphenyl ether, in aqueous polyurethane polyureas, for coatings)		
IT	Coating materials (polyurethane ureas, stable aqueous dispersions)		
IT	78-84-2D, reaction products with hexylmethylenediamine 110-64-5D, adducts with Na bisulfite, propoxylated, polymers with diisocyanatocyclohexylmethane and dimethylolpropionic acid and hexamethylenediisocyanate and polyethylene propylene glycol Bu ether, salts 822-06-0D, polymers with diisocyanatocyclohexylmethane and dimethylolpropionic acid and polyester diol and polyethylene propylene glycol Bu ether and propoxylated dihydroxybutane sodium bisulfite adduct, salt 7631-90-5D, adducts with dihydroxybutene, propoxylated, polymers with diisocyanatocyclohexylmethane and dimethylolpropionic acid and hexamethylenediisocyanate and polyethylene propylene glycol Bu ether, salts 26591-60-6D, polymers with diisocyanatocyclohexylmethane and dimethylolpropionic acid and hexamethylenediisocyanate and polyethylene propylene glycol Bu ether and propoxylated dihydroxy butyl-sodium bisulfite adduct RL: USES (Uses) (stable aqueous dispersions containing polyurethane ureas and, for coatings)		
IT	126-30-7D, polymers with bis(isocyanatocyclohexyl)methane and		

dimethylolpropionic acid and polyethylene propylene glycol Bu ether and polyester diol, salt 4767-03-7D, polymers with bis(isocyanatocyclohexyl)methane and polyester diol and polyethylenepropylene glycol Bu ether, salts 5124-30-1D, polymers with dimethylolpropionic acid and polyester diol and polyethylenepropylene glycol Bu ether, salts 9038-95-3D, polymers with bis(isocyanatocyclohexyl)methane and dimethylolpropionic acid and polyester diol, salts 25212-06-0D, polymers with bis(isocyanatocyclohexyl)methane and dimethylolpropionic acid and polyethylenepropylene glycol Bu ether, salts 96573-91-0D, propoxylated, polymers with bis(isocyanatocyclohexyl)methane and polyester diol and polyethylenepropylene glycol Bu ether, salt

RL: USES (Uses)

(stable aqueous dispersions, for coatings)

IT 9016-45-9 35430-88-7D, propoxylated, polymers with bis(isocyanatocyclohexyl)methane and neopentyl glycol and polyester diol and polyethylenepropyl glycol Bu ether, salt

RL: USES (Uses)

(surfactants, in aqueous dispersions containing polyurethane ureas for coatings)

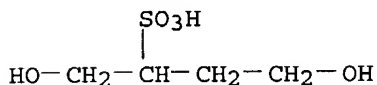
IT 35430-88-7D, propoxylated, polymers with bis(isocyanatocyclohexyl)methane and neopentyl glycol and polyester diol and polyethylenepropyl glycol Bu ether, salt

RL: USES (Uses)

(surfactants, in aqueous dispersions containing polyurethane ureas for coatings)

RN 35430-88-7 HCAPLUS

CN 2-Butanesulfonic acid, 1,4-dihydroxy-, monosodium salt (9CI) (CA INDEX NAME)



● Na

L44 ANSWER 10 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1985:47432 HCAPLUS

DN 102:47432

ED Entered STN: 09 Feb 1985

TI Aqueous, crosslinkable polyurethane coatings and their use for thermoactive-reverse coating

IN Thoma, Wilhelm; Nachtkamp, Klaus; Schroeer, Walter; Langel, Rolf

PA Bayer A.-G., Fed. Rep. Ger.

SO Ger. Offen., 39 pp.

CODEN: GWXXBX

DT Patent

LA German

IC C09D003-72; D06N003-14

CC 42-7 (Coatings, Inks, and Related Products)

FAN.CNT 1

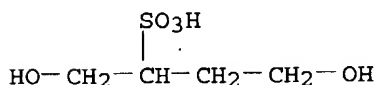
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3313237	A1	19841018	DE 1983-3313237	19830413 <--
	EP 122552	A2	19841024	EP 1984-103777	19840405 <--
	EP 122552	A3	19861126		
	EP 122552	B1	19891018		
	R: BE, DE, FR, GB, IT, NL				

PRAI DE 1983-3313237

19830413 &lt;--

## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 3313237	IC	C09D003-72IC D06N003-14
AB		The title compns., giving coatings with good wet strength and adhesion to fabrics and useful in synthetic leather manufacture, contain polyurethanes bearing OH groups, optionally other polyurethanes, and HCHO resins and blocked isocyanates as crosslinkers. Thus, a 40% polyurethane dispersion was prepared from adipic acid-65:35-1,6-hexanediol-neopentyl glycol polyester 1224, 85:15 polyethylene-polypropylene glycol mono-Bu ether 85.5, propoxylated 2-sulfo-1,4-butanediol Na salt 110.5, isophorone diisocyanate 222, hexamethylene isocyanate 168, 75% di-Et malonate-Et acetoacetate-blocked hexamethylene isocyanate isocyanurate 447, bis[2-(2-isopropyl-3-oxazolidinyl)ethyl] hexamethylenedicarbamate 243, H2H4.H2O 7.5, and H2O 3340 g. A mixture of this dispersion 947, 30% aqueous polyethylene dispersion 15, 30% aqueous polyester-siloxane 9.5, 50% aqueous melamine resin 5.0, and amine sulfonate catalyst solution 0.5 g thickened to viscosity 6 Pa-s (25°) containing 10% TiO2 paste was coated (70 g/m2) on release paper, dried, activated at 120°, bonded to polyester fabric (120 g/m2) at 5 bar, and cured at 120-160°, giving a product with a soft hand and wet and dry adhesion 18-20 and 25-30 N/2.5 cm.
ST		polyurethane emulsion coating textile; crosslinking polyurethane emulsion coating; melamine resin crosslinked polyurethane; isocyanate blocked crosslinked polyurethane; oxazolidine urethane polyurethane coating
IT		Crosslinking agents (aminoplasts and blocked isocyanates, for polyurethane emulsion coatings)
IT		Acrylic fibers, uses and miscellaneous Polyester fibers, uses and miscellaneous RL: USES (Uses) (coating of, inverse, polyurethane emulsions for)
IT		Coating materials (emulsion, polyurethanes, for fabrics, formulation of)
IT		105-53-3D, reaction products with polyisocyanates 141-97-9D, reaction products with polyisocyanates 9011-05-6 28574-90-5D, reaction products with di-Et malonate and Et acetoacetate RL: MOA (Modifier or additive use); USES (Uses) (crosslinking agents, for polyurethane emulsion coatings)
IT		9038-95-3 35430-88-7D, oxypropylated 37353-75-6 59719-67-4 RL: USES (Uses) (in polyurethane emulsion coatings for fabrics)
IT		35430-88-7D, oxypropylated RL: USES (Uses) (in polyurethane emulsion coatings for fabrics)
RN		35430-88-7 HCAPLUS
CN		2-Butanesulfonic acid, 1,4-dihydroxy-, monosodium salt (9CI) (CA INDEX NAME)



● Na

ED Entered STN: 22 Dec 1984  
 TI Magnetic recording tapes  
 PA Nippon Synthetic Chemical Industry Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 4 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC G11B005-70; C09D003-64; C09D005-23  
 ICA C08G063-68  
 CC 77-8 (Magnetic Phenomena)  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 59132418	A2	19840730	JP 1983-7847	19830119 <--
JP 1983-7847		19830119 <--		

## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 59132418	IC ICA	G11B005-70IC C09D003-64IC C09D005-23 C08G063-68

AB A magnetic recording tape is described, whose support is provided with a coating layer containing magnetic powders and a polyester binder having a condensed sulfonate-group-containing polyalc. 0.2-10 mol% with respect to the total glycol components. Addnl. the polyester may have a condensed N-containing compound 0.2-10 mol% with respect to the total glycol components. Thus, a polyester was prepared by heating a mixture containing terephthalic

acid 0.42, isophthalic acid 0.43, adipic acid 0.15, ethylene glycol 0.73, neopentyl glycol 0.75, 2-sodiosulfo-1,4-butanediol 0.02 mol, and Bu<sub>2</sub>SnO 0.1 part at 140-220° to carry out esterification and then heating at 220-260° under ≤1 torr in presence of Sb<sub>2</sub>O<sub>3</sub> 0.1 part to carry out condensation. A poly(ethylene terephthalate) film was then coated with a composition containing the polyester and γ-Fe<sub>2</sub>O<sub>3</sub> to prepare a recording tape having good surface and magnetic properties.

ST polyester binder tape recording

IT Polyesters, uses and miscellaneous

Urethane polymers, uses and miscellaneous

RL: USES (Uses)

(binders, for magnetic recording tapes)

IT Binding materials

(polyester, for magnetic recording tapes)

IT Recording apparatus

(magnetic, tapes, fabrication of, with polyester binders)

IT 100-21-0, uses and miscellaneous 107-21-1, uses and miscellaneous

121-91-5, uses and miscellaneous 124-04-9, uses and miscellaneous

RL: USES (Uses)

(in magnetic recording tape fabrication)

IT 126-30-7 818-08-6 35430-88-7 39278-79-0

RL: PRP (Properties)

(in magnetic recording tape fabrication)

IT 1309-37-1, uses and miscellaneous

RL: USES (Uses)

(magnetic recording tape from)

IT 25038-59-9, uses and miscellaneous

RL: USES (Uses)

(magnetic recording tape support from)

IT 124-09-4, uses and miscellaneous

RL: USES (Uses)

(polyester binder containing, for magnetic recording tape)

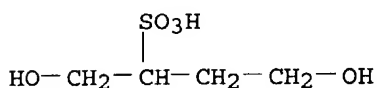
IT 60-32-2 2835-98-5 91600-89-4 93377-25-4

RL: PRP (Properties)

(polyester binder containing, for magnetic recording tape)

IT 1309-64-4, uses and miscellaneous

RL: USES (Uses)  
 (polymerization agent, for polyester binder for recording tapes)  
 IT 35430-88-7  
 RL: PRP (Properties)  
 (in magnetic recording tape fabrication)  
 RN 35430-88-7 HCAPLUS  
 CN 2-Butanesulfonic acid, 1,4-dihydroxy-, monosodium salt (9CI) (CA INDEX NAME)



● Na

L44 ANSWER 12 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1983:406930 HCAPLUS  
 DN 99:6930  
 ED Entered STN: 12 May 1984  
 TI Aqueous dispersions of polyurethane-polyureas containing heat-reactive crosslinkers for coatings  
 IN Nachtkamp, Klaus; Weider, Franz; Noll, Klaus; Pedain, Josef; Hoehne, Klaus  
 PA Bayer A.-G., Fed. Rep. Ger.  
 SO Ger. Offen., 42 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 IC C08L075-00; C08J003-02; C08K005-17; C08G018-10; C08G018-32; C09D003-72  
 CC 42-7 (Coatings, Inks, and Related Products)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3137748	A1	19830331	DE 1981-3137748	19810923 <--
	CA 1193778	A1	19850917	CA 1982-410619	19820901 <--
	EP 75775	A1	19830406	EP 1982-108415	19820913 <--
	EP 75775	B1	19870121		
	R: AT, BE, DE, FR, GB, IT, NL				
	AT 25098	E	19870215	AT 1982-108415	19820913 <--
	US 4452834	A	19840605	US 1982-420172	19820917 <--
	JP 58063715	A2	19830415	JP 1982-163283	19820921 <--
	JP 02059165	B4	19901211		
	ES 515882	A1	19840101	ES 1982-515882	19820922 <--
PRAI	DE 1981-3137748		19810923	<--	
	EP 1982-108415		19820913	<--	

## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES		
DE 3137748	IC	C08L075-00IC	C08J003-02IC	C08K005-17IC
		C08G018-10IC	C08G018-32IC	C09D003-72

AB The title dispersions, useful for coating heat-resistant substrates, are prepared from hydrophilic, NCO group-containing prepolymers; hydrophobic, blocked polyisocyanates; and compds. containing blocked groups liberating free NH<sub>2</sub> or NH groups in water. Thus, stirring adipic acid-hexanediol polymer (mol. weight 840) 315, trimethylolpropane 20.1, dimethylolpropionic acid 53.6, 4,4'-dicyclohexylmethane diisocyanate 471.6, Et<sub>3</sub>N 30.3, and N-methylpyrrolidone 180 g 2-3 h at 60° (NCO content 6.3%), adding a blocked isocyanate (from 900 g hexamethylene diisocyanate isocyanurate trimer and 425 g MEK oxime) 146, acetone azine [627-70-3] 61.6, and water



1190 g, and stirring 3 h at 60° gave a 40% dispersion (Ford cup number 4 viscosity 13 s) which was stable for >1 mo at 50°. When mixed with 70% (based on binder) TiO<sub>2</sub>, coated on unphosphated steel, and baked 30 min at 140° this dispersion gave a 30-35 μ film with pencil hardness 3H, pendulum hardness 145 S, Erichsen indentation 9.9 min, crosshatch adhesion 0, and salt spray corrosion resistance >100 h.

ST polyurethane coating waterborne; isocyanate blocked polyurethane aq;  
acetone azine polyurethane aq

IT Coating materials  
(storage-stable, water-thinned, polyurethane latexes for)

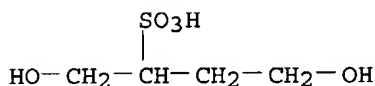
IT 96-29-7D, reaction products with polyisocyanate 105-53-3D, reaction products with polyisocyanates 627-70-3 822-06-0D, isocyanurate derivs., reaction products with butanone oxime 5281-20-9 9038-95-3 26471-62-5D, reaction products with butanone oxime 35430-88-7D, polyoxypropylated 59719-67-4 66230-21-5  
RL: USES (Uses)  
(in polyurethane latex coatings)

IT 86168-56-1 86168-57-2 86168-58-3 86168-60-7  
RL: USES (Uses)  
(latex coatings, containing blocked isocyanate and amines)

IT 35430-88-7D, polyoxypropylated  
RL: USES (Uses)  
(in polyurethane latex coatings)

RN 35430-88-7 HCAPLUS

CN 2-Butanesulfonic acid, 1,4-dihydroxy-, monosodium salt (9CI) (CA INDEX NAME)



● Na

L44 ANSWER 13 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1979:184752 HCAPLUS

DN 90:184752

ED Entered STN: 12 May 1984

TI Steric factors in lymphocyte stimulation by organomercurials

AU Berger, N. A.; Kociolek, K.; Pitha, J.

CS Jewish Hosp., Washington Univ., St. Louis, MO, USA

SO Biochemical and Biophysical Research Communications (1979), 86(4), 1234-40  
CODEN: BBRCA9; ISSN: 0006-291X

DT Journal

LA English

CC 15-13 (Immunochemistry)

AB Resting human lymphocytes were stimulated to initiate DNA synthesis by Hg<sub>2</sub><sup>+</sup> or by the divalent organomercurial, 1,4-bismercury-3, 4-dihydroxybutane. Monovalent methylmercury was ineffective, as was mercury-substituted dextran which is a polyvalent compound where the mercury atoms are farther apart than in the divalent butane derivative. These findings suggest that for organomercurials to stimulate lymphocyte DNA synthesis, they must crosslink protein sulfhydryl groups and bring these groups into close proximity.

ST lymphocyte stimulation organomercurial

IT Lymphocyte  
(stimulation of, by organomercurial, steric factors in)

IT 70170-32-0

*false hit*

RL: BIOL (Biological study)  
(lymphocyte stimulation by, steric factors in relation to)

L44 ANSWER 14 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1976:61022 HCAPLUS

DN 84:61022

ED Entered STN: 12 May 1984

TI Acid-modified polyester

IN Kuenzel, Hans Eg.; Wolf, Gerhard Dieter; Bentz, Francis; Nischk, Guenther

PA Bayer A.-G., Fed. Rep. Ger.

SO Ger. Offen., 13 pp.

CODEN: GWXXBX

DT Patent

LA German

IC C08G

CC 39-2 (Textiles)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2420359	A1	19751106	DE 1974-2420359	19740426 <--
PRAI	DE 1974-2420359		19740426	<--	

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 2420359	IC	C08G

AB Sulfonate-containing polyesters which could be spun into fibers and dyed with basic dyes were prepared by the melt condensation of an aromatic dicarboxylic acid, a glycol, and a sulfonate-containing diol. Thus, sodium 1,4-butanediol-2-sulfonate (I) [35430-88-7], prepared via the addition of NaHSO<sub>3</sub> [7631-90-5] to 1,4-dihydroxy-2-butene [110-64-5], was polymerized at 150-270° with di-Me terephthalate (II) and ethylene glycol (III) in the presence of Zn acetate and Sb<sub>2</sub>O<sub>3</sub> to give a colorless I-II-III polyester [57758-94-8] which was spun into fibers. The polyester fibers were dyed with a basic red azo dye to a deep red color.

ST sulfonate contg polyester fiber; polyesterification butanediol sulfonate; dyeable sulfonate polyester fiber

IT Polymerization  
(melt, of sulfonate-containing diol, with dimethyl terephthalate and ethylene glycol)

IT Dyeing  
(of polyester fibers, containing sulfonated diols for improved)

IT Polyester fibers  
RL: USES (Uses)  
(sulfonate-containing, dyeability with basic dyes)

IT 1,2-Ethanediol, polymer with propoxylated and sulfonated dihydroxybutene and dimethyl terephthalate  
1,4-Benzenedicarboxylic acid, dimethyl ester, polymer with propoxylated and sulfonated 1,4-dihydroxy-2-butene and ethylene glycol  
2-Butene-1,4-diol, propoxylated and sulfonated, polymers with dimethyl terephthalate and ethylene glycol  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(preparation and dyeability of fibers from, with basic dyes)

IT 57758-94-8P  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(preparation and dyeability of fibers from, with basic dyes)

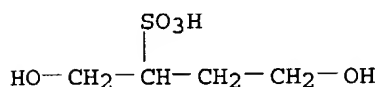
IT 35430-88-7P  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and polymerization of, with dimethyl terephthalate and ethylene glycol)

IT 7631-90-5  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(sulfonation by, of alkene diols)

IT 110-64-5  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (sulfonation of, with sodium bisulfite)

IT 35430-88-7P  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation and polymerization of, with dimethyl terephthalate and ethylene glycol)

RN 35430-88-7 HCAPLUS  
 CN 2-Butanesulfonic acid, 1,4-dihydroxy-, monosodium salt (9CI) (CA INDEX NAME)



● Na

L44 ANSWER 15 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1972:89369 HCAPLUS  
 DN 76:89369  
 ED Entered STN: 12 May 1984  
 TI Solution for electroless copper plating  
 IN Agens, Maynard C.  
 PA General Electric Co.  
 SO Ger. Offen., 26 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 IC C23C  
 CC 56 (Nonferrous Metals and Alloys)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2132003		19720113		<--
	FR 2096574			FR	
	US 3649350		19720000	US	<--
PRAI	US 1970-50996		19700629	<--	

## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 2132003	IC	C23C

AB The stability and activity of electroless Cu plating solns. is increased by addition of the Na salt of a bisulfite adduct of an aliphatic, low-mol.-weight unsatd. alc. Suitable stabilizers include the Na salt of the bisulfite adduct of propargyl alc., 2-butene-1,4-diol and 1,4-butyne-1,3-diol. A H<sub>2</sub>O-soluble B salt such as Na<sub>2</sub>B<sub>4</sub>O<sub>7</sub> may also be added. Optimum results can be obtained by addition of 0.02-0.04 g stabilizer/l. The stabilizer prevents decomposition of the plating bath for 24 hr. Bending tests on Cu-plated, epoxy resin-saturated, glass-fiber strips coated in stabilized and unstabilized baths indicated a significant increase in the quality of Cu coatings deposited from stabilized baths.

ST copper plating electroless; sodium bisulfite adduct copper plating; glass fiber copper coating; propargyl bisulfite adduct copper plating; butenediol bisulfite adduct copper plating; butynediol bisulfite adduct copper plating

IT Glass fibers  
 RL: PRP (Properties)

(epoxy resin reinforced by, stabilizer of copper bath for plating on)

IT Coating process  
(with copper, activation and stabilization by sodium salt of bisulfite adduct of aliphatic low-mol. weight unsatd. alc.)

IT 7440-50-8, uses and miscellaneous  
RL: USES (Uses)  
(coating with, stabilizers for bath for)

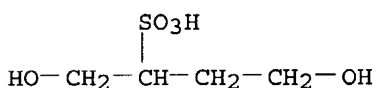
IT 3542-44-7 4187-71-7 32792-21-5 35430-87-6 35430-88-7  
35515-95-8  
RL: USES (Uses)  
(copper coating bath stabilizaation by)

IT 540-92-1  
RL: USES (Uses)  
(copper coating bath stabilization by)

IT 35430-88-7  
RL: USES (Uses)  
(copper coating bath stabilizaation by)

RN 35430-88-7 HCAPLUS

CN 2-Butanesulfonic acid, 1,4-dihydroxy-, monosodium salt (9CI) (CA INDEX NAME)



● Na

L44 ANSWER 16 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1961:111601 HCAPLUS

DN 55:111601

OREF 55:20927b-e

ED Entered STN: 22 Apr 2001

TI Vinyl acetals. II. Oxidation of vinyl acetals

AU Hattori, Saburo

CS Mitsubishi Chem. Ind. Research Lab., Kawasaki

SO Yuki Gosei Kagaku Kyokaishi (1961), 19, 461-3

CODEN: YGKKAE; ISSN: 0037-9980

DT Journal

LA Unavailable

CC 10B (Organic Chemistry: Aliphatic Compounds)

AB Ozonolysis, epoxidation, and oxidation of vinyl acetals with KMnO4 under alkaline

conditions were studied. Into a cooled (-50°) solution of 20.2 g. 1,1-di-n-butoxy-3-butene in 114 g. AcOEt was introduced O (containing 5.2 volume-% ozone) at 8 l./hr. for 5 hrs., then catalytic reduction carried out using 50 g. MeOH and 2 g. 1% Pd-CaCO3, and the filtrate distilled in vacuo to give 16 g. 3,3-di-n-butoxypropionaldehyde, b3 79.5-80.5°. Similarly were prepared 3,3-diethoxypropionaldehyde, b19 74.5° and 3,3-dimethoxypropionaldehyde, b37 69-70°. Also prepared were 2-aminopyrimidine, m. 127-8°, and 1,1,3,3-tetramethoxypropane, b14 67-9°. 1,1-Diethoxy-3-butene (28.8 g.) was added to a solution of 32.4 g. perbenzoic acid in 500 cc. CHCl3 under cooling with ice, the mixture kept in a refrigerator for 8 days, washed with 10% NaOH solution, and distilled in vacuo to give 21.4 g. 1,1-diethoxy-3,4-epoxybutane, b19 88-9°, n25D 1.4180. Similarly prepared was 1,1-dimethoxy-3,4-epoxybutane, b24 72-3°. Into a solution of 87 g. 1,1-dimethoxy-3-butene in 300 cc. H2O was dropped 120 g. KMnO4 in 1500 cc. H2O at 0-5° during 4 hrs., the mixture allowed to stand 1 hr., kept at 80° 1 hr., filtered, the

filtrate salted out with K<sub>2</sub>CO<sub>3</sub>, and extracted with 100 cc. tetrahydrofuran to give 54 g. 1,1-dimethoxy-3,4-dihydroxybutane, b<sub>2</sub> 105-6°, n<sub>20D</sub> 1.4485. Similarly were prepared 1,1-diethoxy-3,4-dihydroxybutane (b<sub>1</sub> 113°, n<sub>25D</sub> 1.4432) and 3,4-dihydroxybutyraldehyde 2,4-dinitrophenylhydrazone, m. 125-6°.

*false hit*

- IT Oxidation  
(of vinyl acetals)
- IT Butane, 3,4-epoxy-1,1-dimethoxy-  
Butyraldehyde, 3,4-dihydroxy-  
Malonaldehyde, acetals  
Propionaldehyde, 3,3-dibutoxy-
- IT Butyraldehyde, 3,4-epoxy-  
(acetals)
- IT Butyraldehyde, 3,4-dihydroxy-  
(and acetals)
- IT 102-52-3, Propane, 1,1,3,3-tetramethoxy- 109-12-6, Pyrimidine, 2-amino-  
6367-37-9, Propionaldehyde, 3,3-diethoxy- 10602-31-0, 1,2-Butanediol,  
4,4-diethoxy- 13269-78-8, Butane, 3,4-epoxy-1,1-diethoxy- 19060-10-7,  
Propionaldehyde, 3,3-dimethoxy- 72380-57-5, 1,2-Butanediol,  
4,4-dimethoxy- 99069-84-8, Butyraldehyde, 3,4-dihydroxy-,  
(2,4-dinitrophenyl)hydrazone  
(preparation of)

L44 ANSWER 17 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1961:105903 HCAPLUS

DN 55:105903

OREF 55:19947e-g

ED Entered STN: 22 Apr 2001

TI 1-Chloro-2,3-epoxy-4-hydroxybutane

IN Hawkins, Edwin George Edward

PA Distillers Co. Ltd.

DT Patent

LA Unavailable

CC 10G (Organic Chemistry: Heterocyclic Compounds)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 864881		19610412	GB	<--
	DE 1082587			DE	

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
GB 864881		

- GB 864881
- AB The high-melting isomer of 1,2-dichloro-3,4-dihydroxybutane (I), obtained from the low-boiling isomer by hydration with H<sub>2</sub>SO<sub>4</sub>, was treated with NaOH to yield 1-chloro-2,3-epoxy-4-hydroxybutane (II). Thus, 16 g. I in 150 ml. H<sub>2</sub>O was treated during 3 days with 4 g. NaOH in 40 ml. H<sub>2</sub>O, a trace of HCl added, the solution extracted with ether, the aqueous phase evaporated to dryness, the residue extracted with EtOAc, and the extract combined with the ether extract to give II, b. 103-7°, on distillation. Similarly, adding aqueous NaOH during 5 min. at 67-70° with use of more concentrated solns. and neutralizing with HOAc and NaHCO<sub>3</sub> gave II, b. 104-9°; use of more concentrated solns. and addition of the NaOH during 30 min. at room temperature gave II, b. 105-10°. Adding NaOH in H<sub>2</sub>O or H<sub>2</sub>O-MeOH to I in MeOH during 30 min. and heating on a H<sub>2</sub>O bath 5 min. gave II.
- IT 3491-32-5, Butane, 1,2-dichloro-3,4-epoxy- 98070-36-1, 1-Butanol,  
4-chloro-2,3-epoxy-  
(preparation of)

*false hit*

L44 ANSWER 18 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1960:44713 HCAPLUS  
 DN 54:44713  
 OREF 54:8850i,8851a-c  
 ED Entered STN: 22 Apr 2001  
 TI Chlorohydroxytetrahydrofuran  
 IN Hawkins, Edwin G. E.  
 PA Distillers Co. Ltd.  
 DT Patent  
 LA Unavailable  
 CC 10G (Organic Chemistry: Heterocyclic Compounds)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 820296		19590916	GB	<--
	DE 1136346			DE	
	US 2993914		1961	US	<--

## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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GB 820296		
-----------	--	--

AB Two geometric isomers (I and II) of 3-chloro-4-hydroxytetrahydrofuran, b15 87-90° and b15 100-5°, are prepared by heating under neutral or acid conditions one of the two isomers (III and IV) of 1,2-dichloro-3,4-dihydroxybutane, m. 70°, which gives I, or m. 65°, which gives II. A mixture of III and IV may be used to give a mixture of I and II, separated by fractional distillation III and IV

may be prepared in situ by treating 1,2-dichloro-3-butene with H<sub>2</sub>O<sub>2</sub> and HCO<sub>2</sub>H to give an epoxide or formate ester which decompose on heating. The mixed adipate of I and II is said to be a good plasticizer for polyvinyl chloride. 1,2-Dichloro-3-butene (300 g.) is mixed with 1 kg. HCO<sub>2</sub>H at 45° and 221 g. 85% H<sub>2</sub>O<sub>2</sub> added over 1 hr., the mixture stirred 22 hrs. at 40° and H<sub>2</sub>O and HCO<sub>2</sub>H removed to leave 99 g. residue of the monoformate ester. EtOH (500 cc.) and 4 g. p-MeC<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>H is added and the mixture refluxed, as 145 g. HCO<sub>2</sub>Et distills. EtOH is removed and the residue distilled to give 4 fractions, (1) 53.0 g., b11 87-90°, (2) (3) 33.8 g., b11 90-103°, (4) 54.3 g., b11 103-5°. (1) is identified as I and (4) as II, the main absorptions for I are at 905, 1002, 1082, 1125, 2890, 2956, 3590 cm.<sup>-1</sup>, for II at 903, 967, 1082, 2890, 2956, 3380 cm.<sup>-1</sup>. III, obtained as above, gives I only on refluxing 2 hrs. in H<sub>2</sub>O; heating 3 g. III 0.5 hr. at 180-200° gives 1.5 g. I (phenyl urethan m. 130-3°). IV (2.6 g.) heated 0.75 hr. at 180-200° gives 1.1 g. II. The mixed isomers of 1,2-dichloro-3,4-epoxybutane (14 g.) heated 1 hr. with 5 g. HCO<sub>2</sub>H and 50 cc. H<sub>2</sub>O then added give, on final distillation, 1.7 g. I and 4.2 g. II.

IT Infrared spectra

(of 4-chlorotetrahydro-3-furanol isomers and derivs.)

IT 1,2-Butanediol, 3,4-dichloro-, stereoisomer

IT 100703-89-7, 3-Furanol, 4-chlorotetrahydro-  
 (stereoisomers, and derivs., and related compds.)

=> => fil reg

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DICTIONARY FILE UPDATES: 20 OCT 2004 HIGHEST RN 766487-31-4

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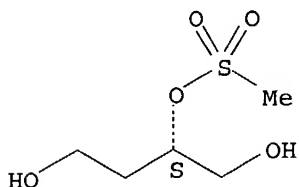
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<http://www.cas.org/ONLINE/DBSS/registryss.html>

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L56 ANSWER 1 OF 3 REGISTRY COPYRIGHT 2004 ACS on STN  
RN 627518-96-1 REGISTRY  
CN 1,2,4-Butanetriol, 2-methanesulfonate, (2S)- (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C5 H12 O5 S  
SR CA  
LC STN Files: CA, CAPLUS, CASREACT  
DT.CA Caplus document type: Patent  
RL.P Roles from patents: PREP (Preparation)

Absolute stereochemistry.

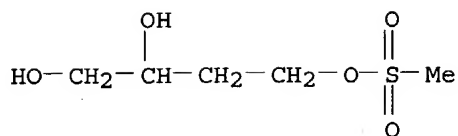


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:4950

L56 ANSWER 2 OF 3 REGISTRY COPYRIGHT 2004 ACS on STN  
RN 271261-58-6 REGISTRY  
CN 1,2,4-Butanetriol, 4-methanesulfonate (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN 1,2-Dihydroxy-4-methanesulfonyloxybutane  
FS 3D CONCORD  
MF C5 H12 O5 S  
SR CA  
LC STN Files: CA, CAPLUS  
DT.CA Caplus document type: Journal; Patent  
RLD.P Roles for non-specific derivatives from patents: PREP (Preparation);  
RACT (Reactant or reagent)  
RL.NP Roles from non-patents: PREP (Preparation); RACT (Reactant or reagent)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

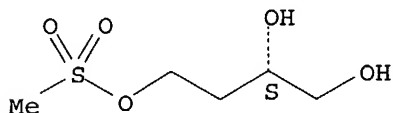
2 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 137:169416

REFERENCE 2: 133:4747

L56 ANSWER 3 OF 3 REGISTRY COPYRIGHT 2004 ACS on STN  
 RN 140192-44-5 REGISTRY  
 CN 1,2,4-Butanetriol, 4-(methanesulfonate), (S)- (9CI) (CA INDEX NAME)  
 FS STEREOSEARCH  
 MF C5 H12 O5 S  
 SR CA  
 LC STN Files: BEILSTEIN\*, CA, CAPLUS  
 (\*File contains numerically searchable property data)  
 DT.CA Caplus document type: Journal  
 RL.NP Roles from non-patents: PREP (Preparation)

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 116:174085

=> fil hcaplus

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FILE COVERS 1907 - 21 Oct 2004 VOL 141 ISS 17  
FILE LAST UPDATED: 20 Oct 2004 (20041020/ED)

This file contains CAS Registry Numbers for easy and accurate  
substance identification.

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L58 ANSWER 1 OF 4 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 2003:931348 HCAPLUS  
DN 140:4950  
ED Entered STN: 28 Nov 2003  
TI Process for preparing (R)-3,4-epoxy-1-butanol  
IN Chun, Jongpil; Hwang, Jae Kwang; Ha, Seung Bum; Cho, Yik-haeng; Yoo, Ji Uk  
PA Samsung Fine Chemicals Co., Ltd., S. Korea  
SO PCT Int. Appl., 14 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
IC ICM C07D301-02  
CC 27-2 (Heterocyclic Compounds (One Hetero Atom))  
Section cross-reference(s): 45

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003097624	A1	20031127	WO 2003-KR989	20030519
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
PRAI	KR 2002-27877	A	20020520		

CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO	2003097624	ICM	C07D301-02
OS	CASREACT 140:4950; MARPAT 140:4950		
AB	(R)-3,4-epoxy-1-butanol is prepared, with relatively high yield and in a cost-effective manner, where an (S)-3-alkyl- [e.g., (S)-methanesulfonyloxybutyrolactone] or an arylsulfonyloxybutyrolactone, used as a starting material, is reduced under a with a borohydride (e.g., sodium borohydride) to give a 2-alkyl- [e.g., (S)-2-methanesulfonyloxy-1,4-butanediol] or arylsulfonyloxy-1,4-butanediol as an intermediate, and the intermediate is then epoxidized in the presence of a base (e.g., potassium carbonate) to invert the chiral center.		
ST	chiral epoxybutanol prepn		
IT	Epoxides		
	RL: SPN (Synthetic preparation); PREP (Preparation) ((R)-3,4-epoxy-1-butanol; process for preparing (R)-3,4-epoxy-1-butanol)		
IT	Lactones		
	RL: RCT (Reactant); RACT (Reactant or reagent) ((S)-3-alkyl- or arylsulfonyloxybutyrolactone; in a process for preparing (R)-3,4-epoxy-1-butanol)		
IT	Glycols, preparation		
	RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT		

(Reactant or reagent)  
 (2-alkyl- or aryl-sulfonyloxy-1,4-butanediol; preparing  
 (R)-3,4-epoxy-1-butanol from)

IT Epimerization  
 Epoxidation  
 Reduction  
 Ring opening  
 (in a process for preparing (R)-3,4-epoxy-1-butanol)

IT Bases, reactions  
 RL: RGT (Reagent); RACT (Reactant or reagent)  
 (in a process for preparing (R)-3,4-epoxy-1-butanol)

IT 584-08-7, Potassium carbonate  
 RL: RGT (Reagent); RACT (Reactant or reagent)  
 (base; in a process for preparing (R)-3,4-epoxy-1-butanol)

IT 16940-66-2, Sodium borohydride 17068-95-0, Calcium borohydride  
 174302-47-7 174368-69-5  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (in a process for preparing (R)-3,4-epoxy-1-butanol)

IT 627518-98-3P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (in a process for preparing (R)-3,4-epoxy-1-butanol)

IT 627518-96-1P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (in a process for preparing (R)-3,4-epoxy-1-butanol)

IT 76282-48-9P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (process for preparing (R)-3,4-epoxy-1-butanol)

IT 16971-29-2, Borohydride  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reductants; in a process for preparing (R)-3,4-epoxy-1-butanol)

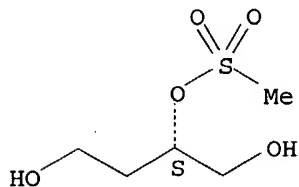
RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE  
 (1) Denki Kagaku Kogyo Kk; JP 02174733 A 1990 HCAPLUS  
 (2) Mitsui Toatsu Chem Inc; JP 61176580 A 1986 HCAPLUS

IT 627518-96-1P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (in a process for preparing (R)-3,4-epoxy-1-butanol)

RN 627518-96-1 HCAPLUS  
 CN 1,2,4-Butanetriol, 2-methanesulfonate, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



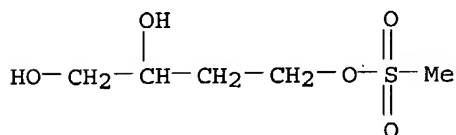
L58 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2002:490653 HCAPLUS  
 DN 137:169416  
 ED Entered STN: 01 Jul 2002  
 TI Method for preparing racemic and optically active isomeric  
 gamma-substituted-butyrolactone derivatives  
 IN Kim, Gyeong Il; Kim, Seong Jin; Noh, Gyeong Rok; Bae, Jae Yeong; Yoo, Ho  
 Seong  
 PA Samsung Fine Chemicals Co., Ltd., S. Korea  
 SO Repub. Korean Kongkae Taeho Kongbo, No pp. given

CODEN: KRXXA7  
 DT Patent  
 LA Korean  
 IC ICM C07D307-32  
 CC 27-12 (Heterocyclic Compounds (One Hetero Atom))  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	KR 2000055107	A	20000905	KR 1999-3567	19990203
PRAI	KR 1999-3567		19990203		

## CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
	KR 2000055107	ICM	C07D307-32
AB	In a method, 1,2,4-butanetriol (I) is used as a starting material and 1,2-substituted-1,2-dihydroxy-4-cyanobutane (II) is used as an intermediate. A method comprises converting I into 1,2-substituted-1,2-dihydroxybutane-4-ol (III), converting III into 1,2,-substituted-1,2-dihydroxy-4-methanesulfonyloxybutane (IV), converting IV into II, and converting II into the title derivs.		
ST	racemic optically active butyrolactone deriv prepn; butanetriol substituted butyrolactone prepn		
IT	Lactones Optically active compounds RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PREP (Preparation); PROC (Process) (method for preparing racemic and optically active isomeric $\gamma$ -substituted-butyrolactone derivs.)		
IT	96-48-0P, $\gamma$ -Butyrolactone RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PREP (Preparation); PROC (Process) (method for preparing racemic and optically active isomeric $\gamma$ -substituted-butyrolactone derivs.)		
IT	3068-00-6DP, 1,2,4-Butanetriol, derivs. 271261-58-6DP, 1,2-Dihydroxy-4-methanesulfonyloxybutane, derivs. 446293-98-7DP, derivs. RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent) (method for preparing racemic and optically active isomeric $\gamma$ -substituted-butyrolactone derivs.)		
IT	3068-00-6, 1,2,4-Butanetriol RL: RCT (Reactant); RACT (Reactant or reagent) (method for preparing racemic and optically active isomeric $\gamma$ -substituted-butyrolactone derivs.)		
IT	271261-58-6DP, 1,2-Dihydroxy-4-methanesulfonyloxybutane, derivs. RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent) (method for preparing racemic and optically active isomeric $\gamma$ -substituted-butyrolactone derivs.)		
RN	271261-58-6 HCAPLUS		
CN	1,2,4-Butanetriol, 4-methanesulfonate (9CI) (CA INDEX NAME)		



ED Entered STN: 26 Apr 2000  
TI On the behaviour of sulfonates towards As(III) nucleophiles  
AU Tsiygoulis, Gerasimos M.; Sotiropoulos, Demetrios N.; Ioannou, Panayiotis V.  
CS Department of Chemistry, University of Patras, Patras, Greece  
SO Phosphorus, Sulfur and Silicon and the Related Elements (1998), 141, 97-110  
CODEN: PSSLEC; ISSN: 1042-6507  
PB Gordon & Breach Science Publishers  
DT Journal  
LA English  
CC 29-8 (Organometallic and Organometalloidal Compounds)  
Section cross-reference(s): 22  
AB Mesylates and hydrophilic amsylates and [3]betylates were tried as substrates in an effort to create a C-As bond. In no case did the authors detect the formation of arsonic acids. With Na3AsO3 as nucleophile the product was the parent alc. due to exclusive attack of the HO- present in the aqueous Na3AsO3. With (PhS)3As as the nucleophile in the absence of Lewis acid catalyst the products were di-Ph disulfide and As2O3 while in the presence of catalyst alkyl Ph sulfide was obtained, implying that the electron pair on As was chemical inactive. As2O3 did not react with these electrophiles, and K di-O-phenylenedioxyarsenate(III) was unreactive towards alkyl bromides but it gave the monoalkyl ether of catechol with amsylates and [3]betylates, again implying that the stereochem. active electron pair of As was not chemical active.  
ST arsadioxacyclopentane prepn; arsenic nucleophile reaction sulfonate; mechanism trithioarsenite reaction amsylate  
IT Nucleophiles  
(Arsenic(III); reactions with sulfonates)  
IT Sulfonic acids, preparation  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(esters; preparation and reactions with arsenic(III) nucleophiles)  
IT Reaction mechanism  
(of tri-Ph trithioarsenite with amsylates)  
IT 271261-62-2P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and conversion to sulfonate)  
IT 271261-63-3P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and reaction with Me trifluoromethane sulfonate)  
IT 271261-59-7P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and reaction with a sulfonyl chloride)  
IT 76099-47-3P 271261-58-6P 271261-61-1P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and reaction with sodium arsenite)  
IT 271261-65-5P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and reactions with sodium arsenite and dioxyarsenate)  
IT 2926-27-4P, Potassium triflate 3068-00-6P, 1,2,4-Butanetriol  
13910-16-2P, Octyl phenyl sulfide 19329-61-4P 21645-51-2P, Aluminum hydroxide, preparation 125884-62-0P 271261-66-6P 271261-67-7P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)  
IT 19715-49-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction with a butanetriol)

IT 83634-83-7  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction with a sulfonate)

IT 1776-70-1  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction with amsylate)

IT 15612-95-0  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction with amsylate and betylate)

IT 76-09-5, Pinacol  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction with arsenic oxide)

IT 1327-53-3, Arsenic oxide (As<sub>2</sub>O<sub>3</sub>)  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction with pinacol)

IT 61165-46-6 271261-69-9  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction with sodium arsenite)

IT 13464-37-4, Sodium arsenite  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reactions with amsylates, mesylates, and betylates)

IT 5754-34-7  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reactions with mesyl chloride and a benzenesulfonyl chloride)

IT 333-27-7, Methyl trifluoromethane sulfonate  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reactions with sulfonates)

IT 61165-44-4  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reactions with tri-Ph trithioarsenite and arsenic oxide)

RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE

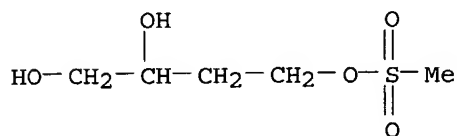
(1) Abalonin, B; Russian Chem Rev 1991, V60, P1346  
(2) Adams, S; Biochem J 1984, V221, P829 HCAPLUS  
(3) Banks, C; J Am Chem Soc 1947, V69, P927 HCAPLUS  
(4) Chadaeva, N; J Gen Chem USSR 1972, V42, P120  
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(8) Gao, Y; J Am Chem Soc 1987, V109, P5765 HCAPLUS  
(9) Hayashi, H; J Am Chem Soc 1973, V95, P8749 HCAPLUS  
(10) Kamai, G; Proc Acad Sci 1957, V115, P717  
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IT 271261-58-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation and reaction with sodium arsenite)

RN 271261-58-6 HCAPLUS

CN 1,2,4-Butanetriol, 4-methanesulfonate (9CI) (CA INDEX NAME)



L58 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1992:174085 HCAPLUS

DN 116:174085

ED Entered STN: 03 May 1992

TI Diastereoselective alkylation of carbanions derived from 1,3-oxathianes

AU Perrier, Helene; Huyer, Greg; Young, Robert N.

CS Merck Frosst Cent. Ther. Res., Pointe Claire-Dorval, QC, H9R 4P8, Can.

SO Tetrahedron Letters (1992), 33(6), 725-8

CODEN: TELEAY; ISSN: 0040-4039

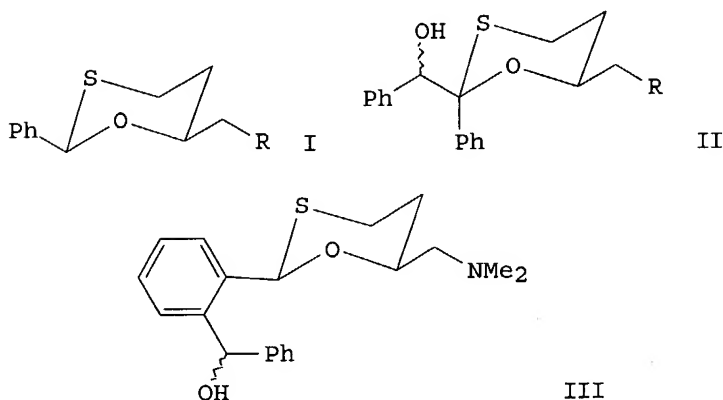
DT Journal

LA English

CC 28-12 (Heterocyclic Compounds (More Than One Hetero Atom))

OS CASREACT 116:174085

GI



AB Carbanions derived from 4-substituted-1,3-oxathiolane and oxathiane were studied. The magnesium anion of 2-phenyl-4-tert-butyl-diphenylsilyloxymethyl-1,3-oxathiane I (R = OSiPh<sub>2</sub>CMe<sub>3</sub>) reacts with benzaldehyde to give the benzhydrol adduct II (R same) as a 7:1 mixture of diastereoisomers. It was also found that solvent had an effect on site of metalation and in ether 2-phenyl-4-dimethylaminomethyl-1,3-oxathiane I (R = NMe<sub>2</sub>) reacts with sec-BuLi to give ortho-metalation. The resulting anion reacts with benzaldehyde to give a 4:1 mixture of diastereoisomers of adduct III.

ST phenyloxathiane carbanion alkylation diastereoselective; oxathiane carbanion alkylation diastereoselective

IT Stereochemistry

(of alkylation of carbanions derived from phenyloxathianes)

IT Alkylation  
(stereoselective, of carbanions derived from phenyloxathianes)

IT 140192-45-6P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation and cyclocondensation of, with benzaldehyde)

IT 140192-46-7P 140192-50-3P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation and lithiation and stereoselective alkylation of, with  
benzaldehyde)

IT 140192-49-0P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation and nucleophilic substitution reaction of, with dimethylamine)

IT 140192-53-6P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation and oxidative oxathiane ring cleavage of)

IT 140192-44-5P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation and protection of the primary alc. and nucleophilic  
substitution of, with sodium sulfide)

IT 140192-47-8P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation and O-alkylation of, with methoxymethyl chloride)

IT 5928-67-6P, (S)-Benzoin 140192-51-4P 140192-52-5P 140192-55-8P  
140192-56-9P 140192-56-9P 140192-57-0P 140192-58-1P 140192-59-2P  
140385-68-8P 140385-69-9P 140385-70-2P 140385-70-2P 140385-71-3P  
140385-72-4P 140386-90-9P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

IT 140192-48-9P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation, lithiation and stereoselective alkylation of, with iodomethane  
and benzaldehyde)

IT 42890-76-6  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(sequential conversion to acetonide, O-mesylation and deprotection of)

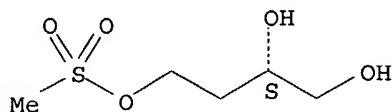
IT 140192-54-7  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(sequential lithiation and stereoselective alkylation of, with  
benzaldehyde)

IT 140192-44-5P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation and protection of the primary alc. and nucleophilic  
substitution of, with sodium sulfide)

RN 140192-44-5 HCAPLUS

CN 1,2,4-Butanetriol, 4-(methanesulfonate), (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> fil reg

FILE 'REGISTRY' ENTERED AT 17:29:24 ON 21 OCT 2004

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provided by InfoChem.

STRUCTURE FILE UPDATES: 20 OCT 2004 HIGHEST RN 766487-31-4  
DICTIONARY FILE UPDATES: 20 OCT 2004 HIGHEST RN 766487-31-4

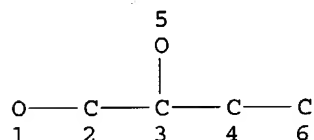
TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more  
information enter HELP PROP at an arrow prompt in the file or refer  
to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

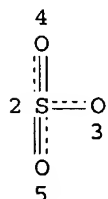
=> d sta que l51  
L9 SCR 2021  
L11 STR



NODE ATTRIBUTES:  
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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
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NUMBER OF NODES IS 6

STEREO ATTRIBUTES: NONE  
L13 25849 SEA FILE=REGISTRY SSS FUL L11 AND L9  
L14 7025 SEA FILE=REGISTRY ABB=ON PLU=ON L13 AND 4/ELC.SUB  
L15 4984 SEA FILE=REGISTRY ABB=ON PLU=ON L14 AND NR>=1  
L16 2041 SEA FILE=REGISTRY ABB=ON PLU=ON L14 NOT L15  
L17 131 SEA FILE=REGISTRY ABB=ON PLU=ON L16 AND PMS/CI  
L18 93 SEA FILE=REGISTRY ABB=ON PLU=ON L16 AND NC>=2  
L19 71 SEA FILE=REGISTRY ABB=ON PLU=ON L17 AND L18  
L20 22 SEA FILE=REGISTRY ABB=ON PLU=ON L18 NOT L19  
L21 60 SEA FILE=REGISTRY ABB=ON PLU=ON L17 NOT (L18 OR L19 OR L20)  
L22 65 SEA FILE=REGISTRY ABB=ON PLU=ON L16 AND IDS/CI  
L23 1833 SEA FILE=REGISTRY ABB=ON PLU=ON L16 NOT (L17 OR L18 OR L19  
OR L20 OR L21 OR L22)  
L46 STR



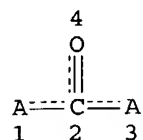
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 NUMBER OF NODES IS 4

STEREO ATTRIBUTES: NONE  
 L48 621 SEA FILE=REGISTRY SUB=L23 SSS FUL L46  
 L50 STR



NODE ATTRIBUTES:  
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 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 4

STEREO ATTRIBUTES: NONE  
 L51 226 SEA FILE=REGISTRY SUB=L48 SSS FUL L50

100.0% PROCESSED 621 ITERATIONS  
 SEARCH TIME: 00.00.01

226 ANSWERS

=> d his

(FILE 'HOME' ENTERED AT 16:48:09 ON 21 OCT 2004)  
 SET COST OFF

FILE 'HCAPLUS' ENTERED AT 16:48:45 ON 21 OCT 2004  
 L1 1 S (US20040054164 OR US6610671 OR US20020128468)/PN OR (WO2002-U  
 SEL RN

FILE 'REGISTRY' ENTERED AT 16:50:28 ON 21 OCT 2004

L2	8 S E1-E8
L3	2 S L2 AND S/ELS
L4	1 S 137349-92-9
L5	1 S 137349-92-9/CRN
L6	2 S L4,L5
L7	1 S L3 NOT L6
L8	STR
L9	SCR 2021
L10	50 S L8 AND L9
L11	STR L8
L12	50 S L11 AND L9
L13	25849 S L11 AND L9 FUL
	SAV TEMP L13 MAIER601/A
L14	7025 S L13 AND 4/ELC.SUB
L15	4984 S L14 AND NR>=1
L16	2041 S L14 NOT L15
L17	131 S L16 AND PMS/CI
L18	93 S L16 AND NC>=2
L19	71 S L17 AND L18
L20	22 S L18 NOT L19

L21 60 S L17 NOT L18-L20  
L22 65 S L16 AND IDS/CI  
L23 1833 S L16 NOT L17-L22  
L24 946 S L23 AND 1/S  
L25 442 S L24 AND 3-5/O  
L26 7 S L25 AND 4/C  
L27 3 S L26 NOT (MERCAPTO OR ION)  
L28 12 S L23 AND 4/C  
L29 5 S L28 NOT (MERCAPTO OR ION)  
L30 4 S L29 NOT TRIHYDROXY  
L31 6 S L6,L7,L27,L30  
L32 756 S L23 AND 2/S  
L33 693 S L32 AND O<=10  
L34 679 S L33 NOT MERCAPTO  
L35 616 S L34 NOT ESTER  
L36 254 S L35 NOT ACET?

FILE 'HCAOLD' ENTERED AT 17:13:56 ON 21 OCT 2004

L37 0 S L31

FILE 'HCAPLUS' ENTERED AT 17:14:29 ON 21 OCT 2004

L38 12 S L31  
L39 1 S L38 AND EASTMAN?/PA,CS  
L40 1 S L38 AND (BUCHANAN ? OR FALLING ? OR LAMBERT ? OR LARGE ? OR S  
L41 1 S L39,L40  
L42 6 S 3 4 DIHYDROXYBUTANE  
L43 18 S L38-L42  
L44 18 S L43 AND (PD<=20010111 OR PRD<=20010111 OR AD<=20010111)

FILE 'USPATFULL, USPAT2' ENTERED AT 17:19:10 ON 21 OCT 2004

L45 8 S L31

FILE 'REGISTRY' ENTERED AT 17:19:28 ON 21 OCT 2004

FILE 'USPATFULL, USPAT2' ENTERED AT 17:19:42 ON 21 OCT 2004

FILE 'HCAPLUS' ENTERED AT 17:20:29 ON 21 OCT 2004

SET COST ON  
SET COST OFF

FILE 'REGISTRY' ENTERED AT 17:22:56 ON 21 OCT 2004

L46 STR  
L47 34 S L46 SAM SUB=L23  
L48 621 S L46 FUL SUB=L23  
SAV L48 MAIER601A/A  
L49 487 S L48 NOT L33  
L50 STR  
L51 226 S L50 FUL SUB=L48  
L52 395 S L48 NOT L51  
L53 292 S L49 AND L52  
L54 15 S L53 AND C<=5  
L55 11 S L54 NOT L31  
SEL RN 5 6 7  
L56 3 S E9-E11

FILE 'HCAOLD' ENTERED AT 17:28:44 ON 21 OCT 2004

L57 0 S L56

FILE 'HCAPLUS' ENTERED AT 17:28:49 ON 21 OCT 2004

L58 4 S L56

FILE 'USPATFULL, USPAT2' ENTERED AT 17:29:06 ON 21 OCT 2004

L59 0 S L56

FILE 'REGISTRY' ENTERED AT 17:29:13 ON 21 OCT 2004

FILE 'HCAPLUS' ENTERED AT 17:29:17 ON 21 OCT 2004

FILE 'REGISTRY' ENTERED AT 17:29:24 ON 21 OCT 2004

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